PayPal™

Sandbox User Guide

Last updated: April 2012

PayPal Sandbox User Guide

Document Number: 100008.en_US-201204

© 2012 PayPal, Inc. All rights reserved. PayPal is a registered trademark of PayPal, Inc. The PayPal logo is a trademark of PayPal, Inc. Other trademarks and brands are the property of their respective owners.
The information in this document belongs to PayPal, Inc. It may not be used, reproduced or disclosed without the written approval of PayPal, Inc.
Copyright © PayPal. All rights reserved. PayPal S.à r.l. et Cie, S.C.A., Société en Commandite par Actions. Registered office: 22-24 Boulevard Royal, L-2449, Luxembourg, R.C.S. Luxembourg B 118 349
Consumer advisory: The PayPal™ payment service is regarded as a stored value facility under Singapore law. As such, it does not require the approval of the Monetary Authority of Singapore. You are advised to read the terms and conditions carefully.

Notice of non-liability:
PayPal, Inc. is providing the information in this document to you “AS-IS” with all faults. PayPal, Inc. makes no warranties of any kind (whether express, implied or statutory) with respect to the information contained herein. PayPal, Inc. assumes no liability for damages (whether direct or indirect), caused by errors or omissions, or resulting from the use of this document or the information contained in this document or resulting from the application or use of the product or service described herein. PayPal, Inc. reserves the right to make changes to any information herein without further notice.

Contents

Preface 5

Intended Audience 5
Documentation Feedback 5

Chapter 1 Overview to the PayPal Sandbox 7

At a Glance: Differences between the Sandbox and Live PayPal 7

Chapter 2 Accessing the PayPal Sandbox 9

Signing Up for Sandbox Access 9
Welcome to the PayPal Sandbox 11
Test Email 12

Chapter 3 Setting Up Test Accounts 13

Planning the Types of Test Accounts You Need 13
Managing Test Accounts 14
Creating a Preconfigured Account 14
Verified Account Status 18
Resetting a Preconfigured Account 18
Creating a Test Account Manually 20
Creating a PayPal Payments Pro Account 21
Adding a Funding Source 23
Changing or Adding Additional Bank Accounts 23
Adding Credit Cards 24
Generating a Credit Card Number to Test PayPal Account Optional 24

Chapter 4 Testing PayPal Website Features 27

Website Payments with Buy Now Button 27
Encrypted Website Payments 28
Testing Payments with Buy Now Button 28
Verifying a Test Payment 28
Handling Pending Transactions 29

Creating a Pending Transaction 29
Completing or Canceling a Pending Transaction 29
Verifying a Test Refund 30
Transferring Funds to a Test Account 31
Clearing or Failing Test eCheck Transactions 31
Sending Funds to a Seller 32
Billing A Customer 32

Chapter 5 Testing an Express Checkout Integration 35

Chapter 6 Sandbox Test Tools 41

Instant Payment Notification Simulator 41
Testing IPN Messages in the Sandbox 43

Chapter 7 Testing Error Conditions 45

API Testing 46
Negative Testing Using an Amount-Related Trigger Field 48
Negative Testing Using a Non-Amount Trigger Field 49
Negative Testing With Multiple Messages 49
Testing Using AVS Codes 50
Testing an AVS Code Using Virtual Terminal 51
Testing an AVS Code Using DoDirectPayment 52
Testing Using CVV Codes 53
Testing a CVV Code Using Virtual Terminal 54
Testing a CVV Code Using DoDirectPayment 55

Chapter 8 Testing Payment Review 57

Chapter 9 Technical Support 59

Contacting Customer Service for Live PayPal Website Help 59
Contacting Developer Technical Support for API Help 59

Revision History 61

Preface

This document describes the PayPal test environment called the Sandbox.

Intended Audience

This document is written for merchants and developers who want to test their PayPal-based applications before using them in production.

Documentation Feedback

Help us improve this guide by sending feedback to:

`documentationfeedback@paypal.com`

1 Overview to the PayPal Sandbox

The PayPal Sandbox is a self-contained environment within which you can prototype and test PayPal features and APIs. The PayPal Sandbox is an almost identical copy of the live PayPal website. Its purpose is to give developers a shielded environment for testing and integration purposes and to help avoid problems that might occur while testing PayPal integration solutions on the live site. Before moving any PayPal-based application into production, you should test the application in the Sandbox .

At a Glance: Differences between the Sandbox and Live PayPal

The following table compares the Sandbox and Live PayPal. This is an at-a-glance view of the differences from the perspective of an in-house or third-party developer for a business.

You can also use this table as a checklist.

	PayPal Sandbox	Live PayPal Website and API Service
Type of PayPal Accounts	Depending on the feature you want to develop and test, you need a Personal, Business, or Premier account.	Personal, Business, or Premier account
Site logos in upper left corner	https://www.sandbox.paypal.com	https://www.paypal.com
NVP API Servers	`https://api.sandbox.paypal.com/nvp/`	For API Certificate security: `https://api.paypal.com/nvp/` For API Signature security: `https://api-3t.paypal.com/nvp/`
SOAP API Servers	`https://api.sandbox.paypal.com/2.0/`	For API Certificate security: `https://api.paypal.com/2.0/` For API Signature security: `https://api-3t.paypal.com/2.0/`
Business roles	You fill all roles you need to test: merchant, buyer, and seller.	Real-world people fill these roles.

	PayPal Sandbox	Live PayPal Website and API Service
Company and people's names and postal addresses	Completely fictitious. Before you begin working with the Sandbox, create the details for all the business roles you must fulfill. The Sandbox simulates verification of postal addresses and names.	Real companies' and people's names and postal addresses.
Email addresses and email inboxes	The Sandbox has a special-purpose email inbox for your testing, contained in the Sandbox itself.	Real email address and inbox for each business role
Bank account and credit card numbers	The Sandbox creates bank accounts, credit card numbers, and CVV2 numbers you need in order to develop and test; all of which are fictitious and only used within the Sandbox. The Sandbox simulates the verification of these numbers. Transactions do not affect real accounts and actual money is never exchanged.	Actual verification of bank account numbers, credit card numbers, and CVV2 numbers
Social Security Number for Billing Agreements	111-*nn-nnnn*	Real social security numbers
PayPal transactions	The Sandbox creates all fictitious bank accounts, credit card numbers, and CVV2 numbers you need for development and testing. The Sandbox simulates the verification of these numbers.	Live transactions, cleared by live PayPal processes
Fraud detection	Fraud detection is not enabled for the Sandbox.	Full protection through PayPal's fraud detection
Digital certificates	After you request digital certificates for use with the PayPal Web Services API, the Sandbox automatically generates them. They are available for immediate downloading.	To safeguard your and your customers' security, requests for digital certificates for use with the Live PayPal Web Services API must be verified by PayPal before they are issued. You are notified in email when your request has been approved.
PayPal Merchant Features supported	All features of the live PayPal website, except closing an account, auction features, monthly statements, shipping preferences, and PayPal Shops.	

2 Accessing the PayPal Sandbox

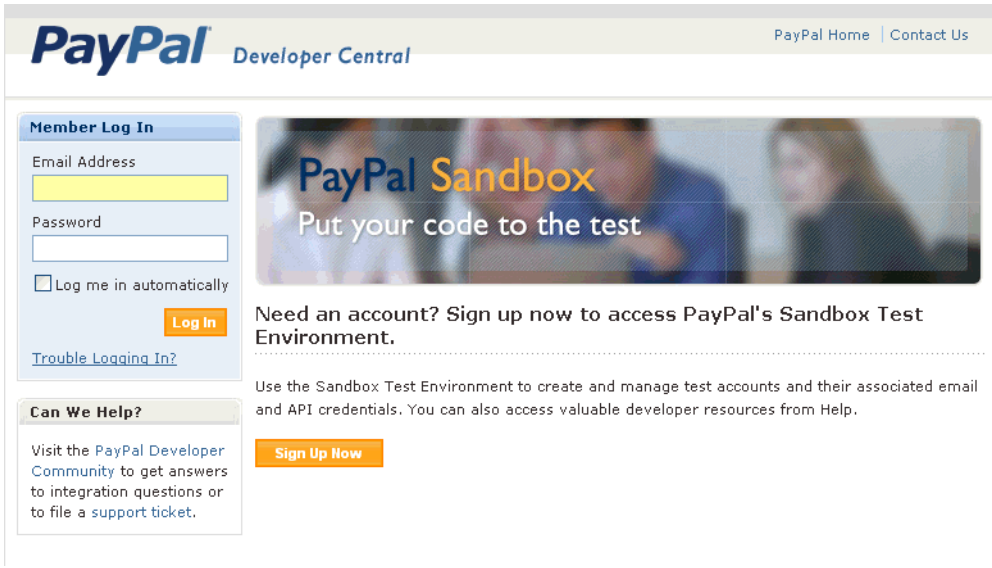
To access the PayPal Sandbox, sign up for an account at https://developer.paypal.com. After signing up, you access the Sandbox either programmatically or by logging in.

Depending on the PayPal feature you want to test with an application, you need to set up different types of test accounts: PayPal Personal (or Premier) and Business accounts. See "Planning the Types of Test Accounts You Need" on page 13.

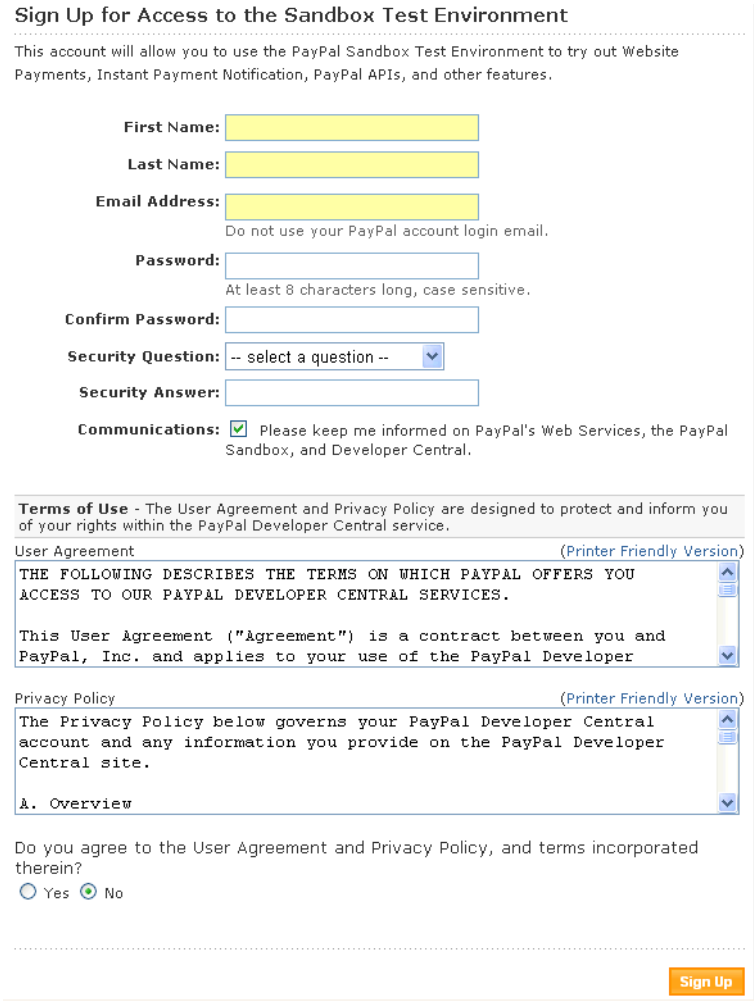
Signing Up for Sandbox Access

To sign up for Sandbox access:

1. Go to https://developer.paypal.com. The log in screen is shown below:



2. If you already have an account, enter your Log In Email and Password and click **Log In**.
3. If you do not already have an account, click **Sign Up Now** and provide the requested information shown below:



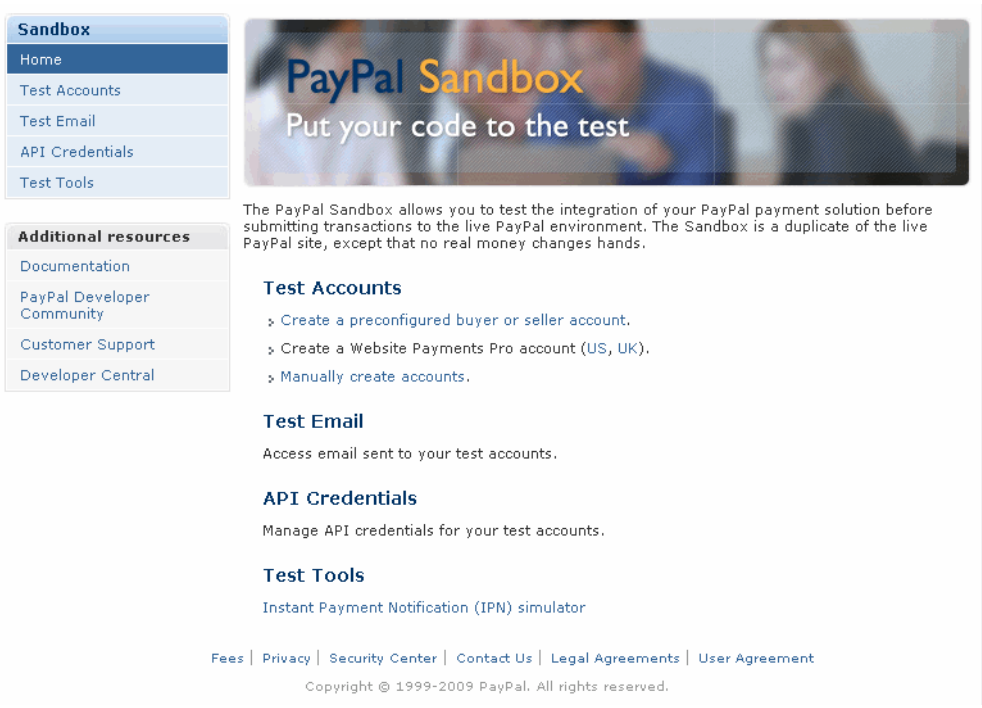
IMPORTANT: Do not use the same log in email address or password that you use for logging into the live `paypal.com` site because later you may allow someone to work in the Sandbox on your behalf but not want to allow access to your regular PayPal account.

After you sign up, PayPal sends login instructions to the email address you used to sign-up. If you have mail filtering enabled in your mail software, the email sent by PayPal might be filtered out or stored in a folder where you are not expecting it to be. For instance, with Microsoft Outlook mail software, your filtering might cause the email to be stored in "Junk" or "Spam."

4. Respond to the confirmation e-mail and log in.

Welcome to the PayPal Sandbox

When you log in to the Sandbox, the Sandbox Test Environment home page appears, as follows:



On this page, you can perform the following actions:

- Create test accounts. You can create and manage test accounts from the **Test Accounts** tab. From this tab, you can also enter the Sandbox Test Site, which simulates the live `paypal.com` site. For more information, see "Setting Up Test Accounts" on page 13.
- Access email sent to test accounts from the **Test Email** tab. For more information, see "Test Email" on page 12.
- View API credentials for business test accounts from the **API Credentials** tab. An API signature, which is the preferred kind of credential, is automatically created when you create a Business test account. You need the information on this tab when you test APIs.
- Obtain technical information about PayPal products and APIs using the **Help** link.
- Simulate Instant Payment Notifications using a test tool. For more information, see "Sandbox Test Tools" on page 41.
- Change the log in password using the **Profile** link.

  NOTE: You cannot change the Log In Email address.

Test Email

When certain kinds of transactions occur in the live PayPal system, PayPal sends email messages to the real email addresses of the participants. From these email messages, the recipient or initiator of an event or transaction can verify that the event took place and that the monetary amounts associated with the event are correct.

PayPal test email, however, is a self-contained email system in the Sandbox itself. You see email messages addressed only to the Sandbox test accounts you set up. Up to 30 of the latest email messages are listed on the **Test Email** tab. The subject line of email messages you have not read are in bold. Click a subject line to read the message.

3 Setting Up Test Accounts

Depending on the business application you are developing and testing, you need different types of test accounts. There are two types of test accounts: Personal (or Premier) and Business.

Planning the Types of Test Accounts You Need

Determine the types of test accounts you need to test the applications you are developing. In addition, determine the number of different accounts you need. Typically, you create at least one seller (Business) account and one buyer (Personal or Premier) account. You might need several different Personal or Business PayPal test accounts to test your application.

When you create a test account, the following information is generated for you:

- Mailing address
- Email address and password for the test PayPal account. You can specify the same password (not email address) for all your test accounts so that you can more easily remember it.
- Security questions and answers. You can use the same security questions and answers for all your test accounts so that you can more easily remember them.

  IMPORTANT: Never use real email addresses or live paypal.com passwords for a test account. Only use fictitious information in your answers to the security questions. All of this data should be fictional.
- Personal or Business account
- Your agreement to the terms of using the Sandbox

For Business accounts, the following additional information is generated for you:

- Business name and address
- Customer service contact information
- Business owner contact information
- Business owner address
- Social Security Number to sign up for PayPal Payments Pro (previously known as Website Payments Pro)

Managing Test Accounts

You can view, work with, or launch the Sandbox Test Site for all your test accounts. You can also create new accounts or remove test email addresses from your view.

- To work with test accounts, log in to https://developer.paypal.com, and click the **Test Accounts** tab.
- To create a new account, click the **Create Account** link.
- To work with the account, select the account by clicking the radio button associated with it on the left.

You can simulate the live `paypal.com` site for the selected account by clicking **Enter Sandbox Test Site**. When you logged in to https://developer.paypal.com, you might have set the **Log me in automatically** checkbox to allow direct access to https://www.sandbox.paypal.com/, in which case you do not have to launch the Sandbox to access it.

IMPORTANT: The **Delete** button does not delete the test account. It removes the test account from your list of accounts, but the email address for the test account is still on file for the Sandbox. You cannot reuse an email address that is still on file for the Sandbox. If you want to rerun a test, do not delete the account; you can use the **Reset** option instead.

The following sections describe how to create a preconfigured test account, which allows merchants to create an account using a typical configuration that is useful for most testing. You can also create a test account manually, which might be required if the preconfigured test account is not adequate for your needs.

NOTE: The first test account that you create is always a preconfigured test account. After you create the first account, you click **Preconfigured** to create a preconfigured test account or **Create Manually** to create the test account manually. The following sections assume that a test account has not yet been created.

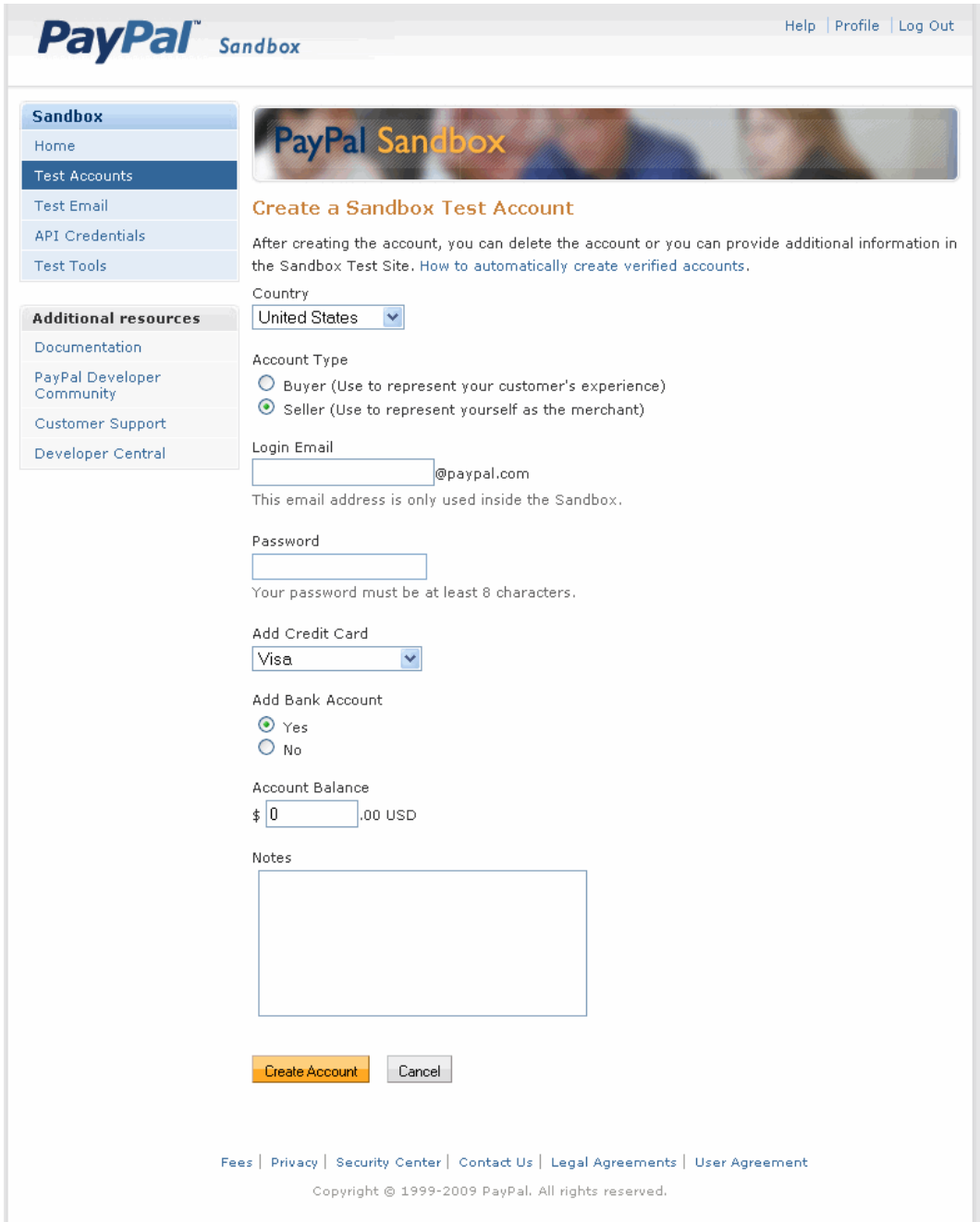
Creating a Preconfigured Account

To create a preconfigured account:

1. After logging in, select **Test Accounts** and click the **Create Test Account** link.
2. Choose the country for which you want the account to be registered.

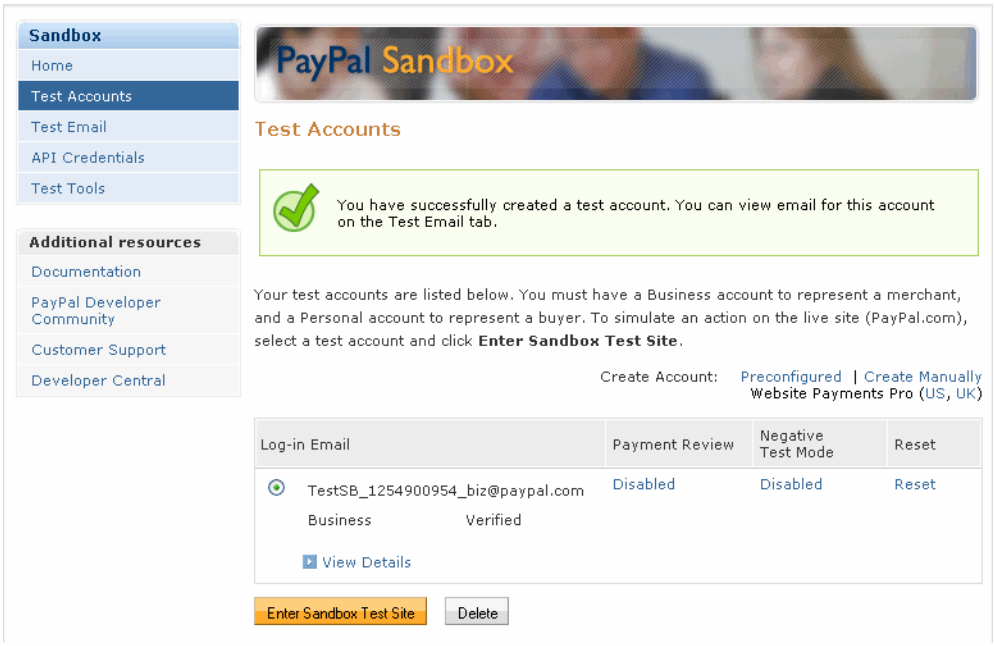
3. Specify the **Account Type** and make other selections or accept the defaults.

IMPORTANT: When entering a value into the Login Email field, you do not enter a complete email address, rather you enter a prefix of up to 6 characters, which will appear at the beginning of the email address. PayPal creates an email address for you using an internal algorithm. You cannot specify the complete email address. For example, if you specified `test01` in the Login Email field, the email address, which is only used in the Sandbox, would be something like `test01_1279824359_per@adomain.com` .

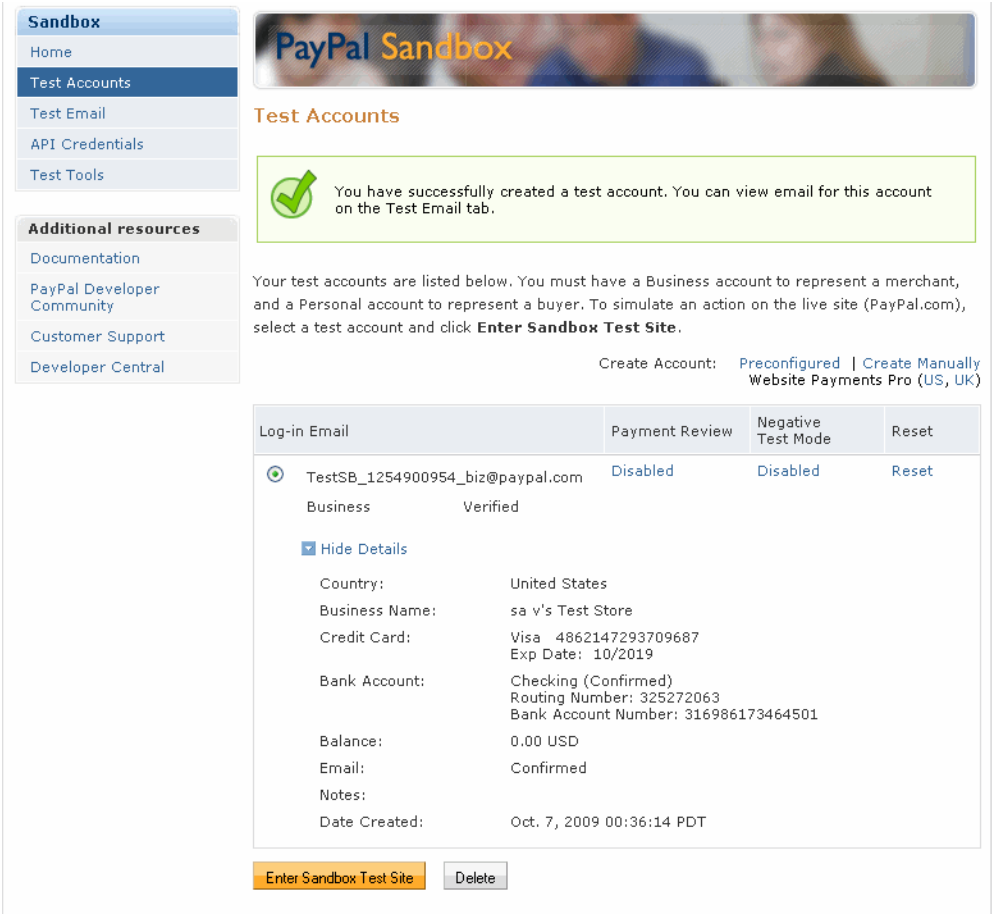


4. Click **Create Account**.

   The result is shown below.



NOTE: The Login Email is a pseudo-randomized address, which is based on the address you specified. Credit card and bank account numbers are also generated randomly, which are shown when you view details:



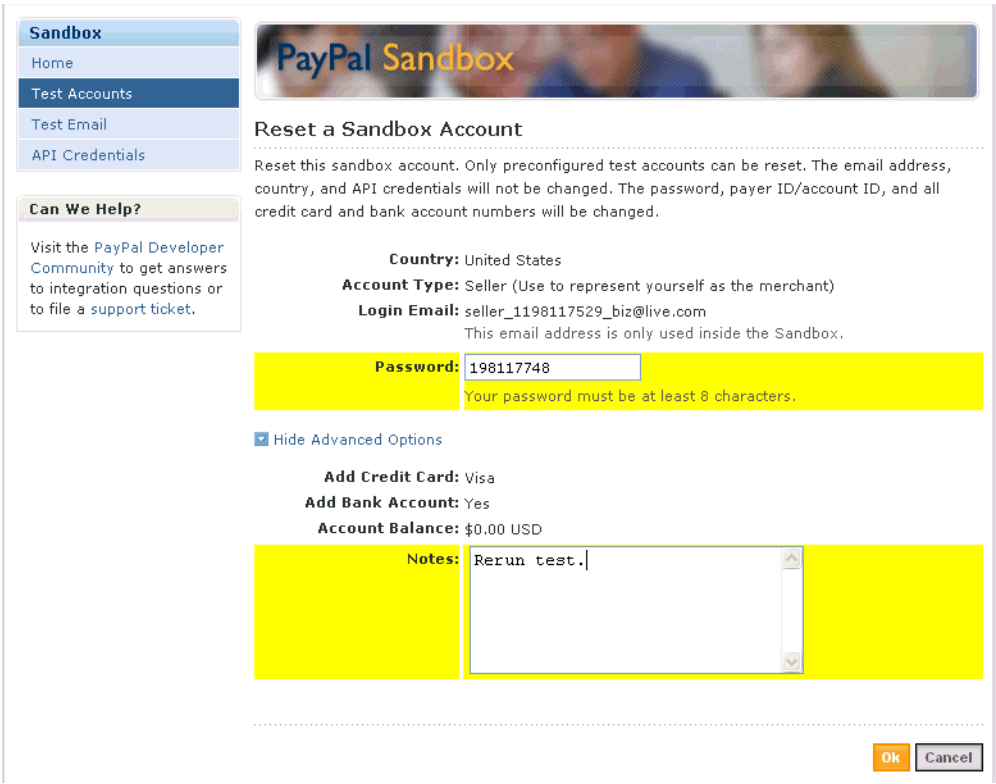
Verified Account Status

By default, a preconfigured test account has a confirmed bank account and email addresses. To create an unverified account change the bank account to unconfirmed.

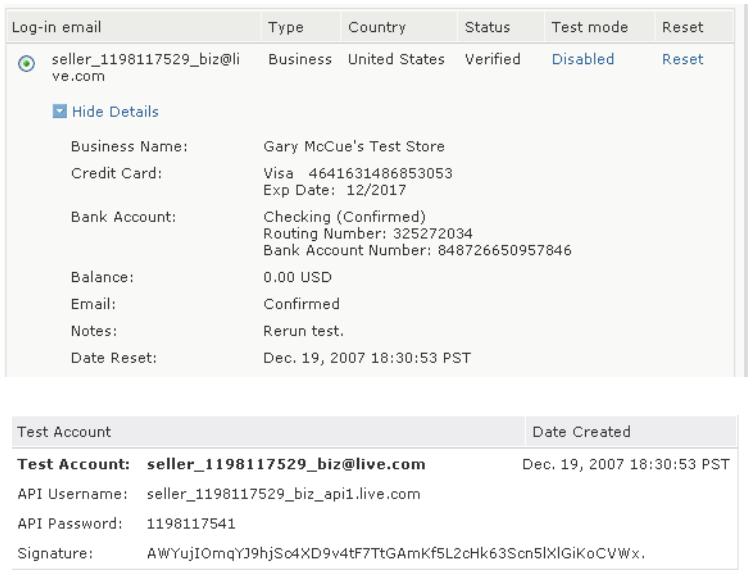
Resetting a Preconfigured Account

You can reset a preconfigured test account. This is useful when you want to rerun transactions and need to start from the same point as the original test. Resetting a test account preserves information required to rerun the test, such as the account email address, API credentials, credit card and bank accounts, and starting balance. It does not, however, use the same bank account or credit card numbers. Consider the following account information associated with a test account:

When you click **Reset** for the account from the Test Accounts tab, you are prompted to enter a new password and a note to associate with the account:



After you reset the account, the information to rerun your test is preserved:



Log-in email	Type	Country	Status	Test mode	Reset
seller_1198117529_biz@live.com	Business	United States	Verified	Disabled	Reset

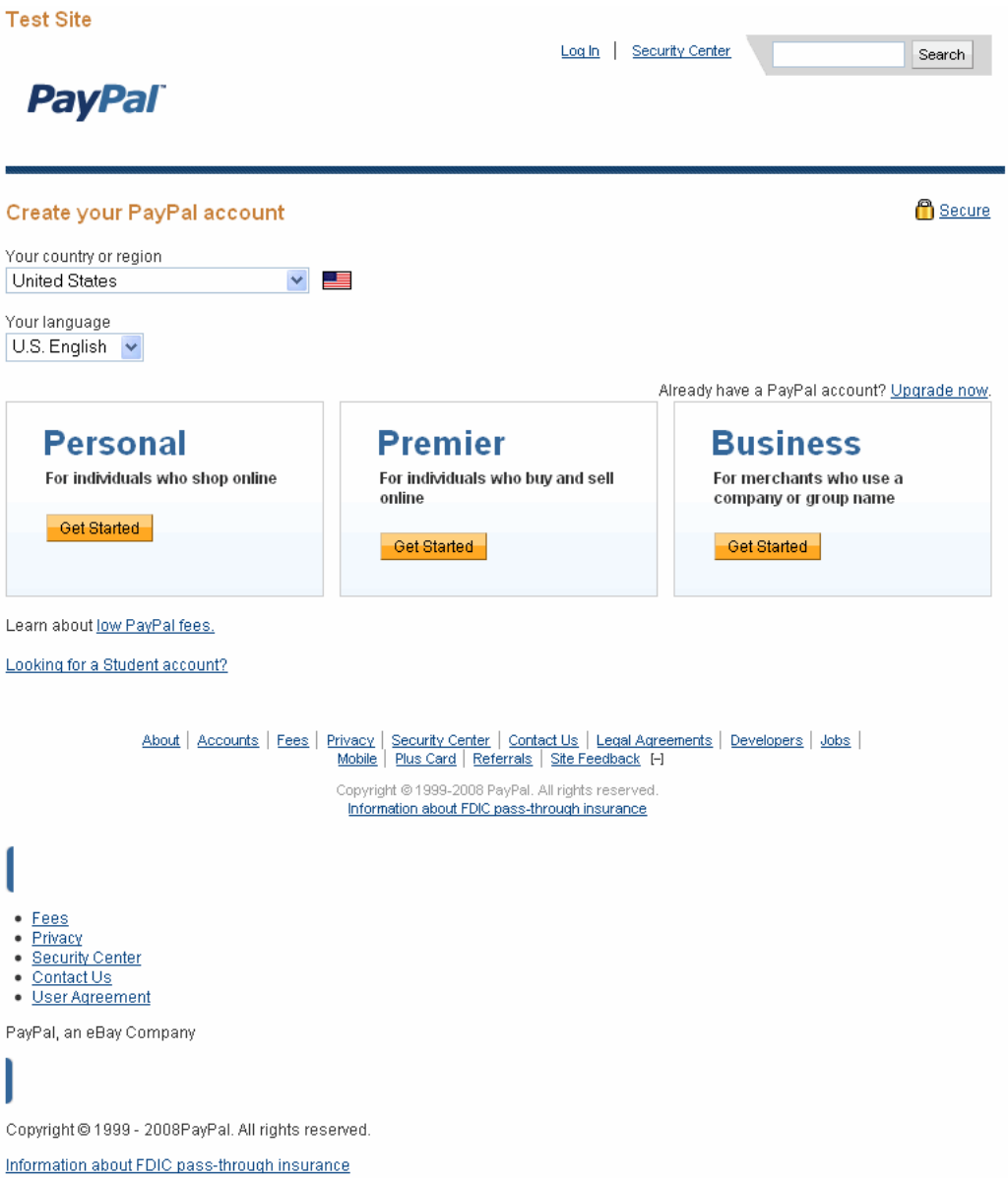
Hide Details

Business Name:	Gary McCue's Test Store
Credit Card:	Visa 4641631486853053 Exp Date: 12/2017
Bank Account:	Checking (Confirmed) Routing Number: 325272034 Bank Account Number: 848726650957846
Balance:	0.00 USD
Email:	Confirmed
Notes:	Rerun test.
Date Reset:	Dec. 19, 2007 18:30:53 PST

Test Account		Date Created
Test Account:	**seller_1198117529_biz@live.com**	Dec. 19, 2007 18:30:53 PST
API Username:	seller_1198117529_biz_api1.live.com	
API Password:	1198117541	
Signature:	AWYujIOmqYJ9hjSc4XD9v4tF7TtGAmKf5L2cHk63Scn5lXlGiKoCVWx.	

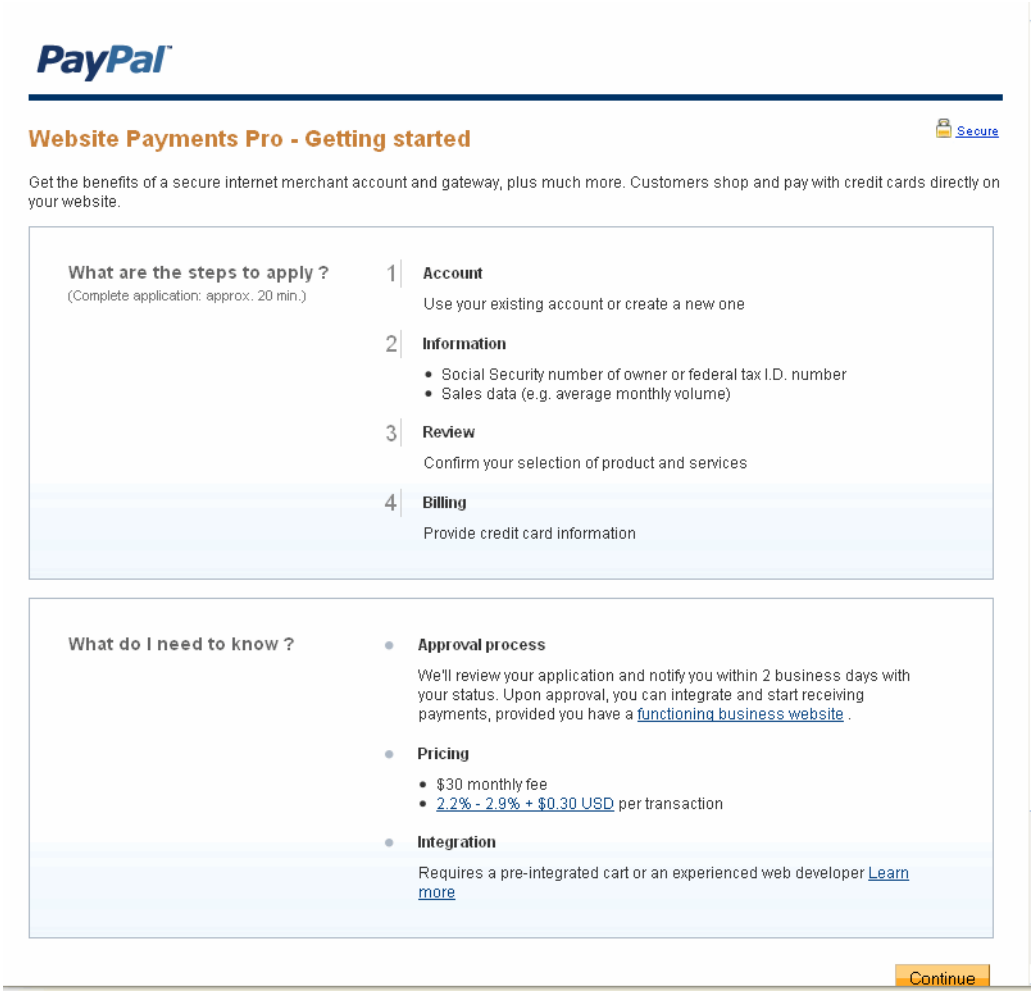
Creating a Test Account Manually

You can create a test account manually by clicking the **Create Manually** link for Create Account. This action automatically places you in the Sandbox Test Site, where you create the test account just as you would on the live site:



Creating a PayPal Payments Pro Account

You can use a wizard to create a PayPal Payments Pro business account by clicking the **PayPal Payments Pro** link for Create Account. This action automatically places you in the Sandbox Test Site, where you create the test account just as you would create a PayPal Payments Pro account on the live site using a wizard to take you through the steps:



To complete the application for PayPal Payments Pro, you must enter a Social Security Number. You can enter a Social Security Number in the following format:

111*xxxxx*

where *x* is any digit.

NOTE: The SSN you enter must not have already been recorded for some other account in the Sandbox.

Adding a Funding Source

To test transactions, you must add a source of funds to your buyer test account. The following sections describe your choices:

1. "Changing or Adding Additional Bank Accounts" on page 23. You can add bank accounts, but they will not contain funds unless you use Send Money to send the bank account holder money.
2. "Adding Credit Cards" on page 24. For testing, this is the most efficient way to add funds.

NOTE: No money or funds are actually transferred in the Sandbox; however, to protect confidentiality, you should not use actual credit card numbers or bank accounts if you allow other people to log in to your Sandbox account.

Changing or Adding Additional Bank Accounts

You add a bank account to the Sandbox test account representing a customer or buyer so that you can test transactions between the buyer's account and another account; typically, the other account is a business account that represents yourself as a merchant. Adding a bank account also changes the account status from "Unverified" to "Verified."

The bank account is a source of funds for a user's PayPal account, and thus for transactions between that test account and other test accounts. A test account can have multiple bank accounts, but at least one is required in order to verify the test account.

The Sandbox automatically generates bank account and sort code numbers when you add a bank account.

For Australia, Canada, Germany, or UK, use the automatically generated bank account information only for test US bank accounts. To add test Canadian, German, or UK bank account information, follow these guidelines.

Australia	Canada	Germany	UK
BSB Number: 242-200	**Transit Number:** 00001	**Routing Number:** 37020500	**Bank Account Number:** Any 8-digit number
Account Number: any random number	**Institution Number:** 311	**Bank Account Number:** Any 10-digit number	**Sort Code:** 609204 or 700709
	Bank Account Number: Any one-digit to 12-digit number	**Sort Code:** Any 8-digit number	

To add a bank account:

1. Select a test account and click **Enter Sandbox Test Site**.
2. Navigate to **My Account** > **Profile**.

3. Under the **Financial Information** header, click the **Bank Accounts** link.
4. In the **Bank Account** window, click **Add**.
5. In the **Add Bank Account** window:
   - Enter a fictitious bank name. Using the automatically generated bank account number as the name of the bank will make that account number visible to you for use in testing later.
   - Except for UK or German test bank accounts, leave all other automatically generated information as is.
   - Make a note of the test bank account number, because it will be handy to have when you do your testing.
   - Click **Add Bank Account**.
6. In the resulting success window, click the **Continue** button at the bottom.

   The **My Account** > **Overview** page opens.
7. Click the **Confirm Bank Account** link in the **Activate Account** box at the left side.
8. In the **Confirm Bank Account** window, click **Submit**.

Adding Credit Cards

A credit card is a source of funds for the buyer's PayPal account, and thus can be used for transactions between a buyer's test account and other test accounts. A test account can have multiple credit cards. Test credit card numbers cannot be used to pay for real-world transactions.

To create additional credit card accounts for an already existing test account:

1. Select a buyer's test account and click **Enter Sandbox Test Site**.
2. Navigate to **My Account** > **Profile**.
3. Under the Financial Information header, click the Credit Cards link.
4. In the **Credit Cards** window, click the **Add** button.
5. In the **Add Credit Card** window, provide a credit card number.
6. Make a note of the credit card number for your use in later testing.
7. Click **Add Credit Card**.

Generating a Credit Card Number to Test PayPal Account Optional

To obtain a test credit card number for testing PayPal Account Optional:

1. Select a buyer's test account and click **Enter Sandbox Test Site**.

2. Navigate to **My Account** > **Profile**.
3. Under the **Financial Information** header, click the **Credit Cards** link.

   Make a note of the credit card number for your use in later testing.

4 Testing PayPal Website Features

This chapter describes PayPal products features you can test in the Sandbox without PayPal APIs:

- **Website Payments with Buy Now Buttons**: Use the Sandbox to test accepting PayPal as a payment mechanism on a website.
- **Shopping Cart Purchases**: Use the Sandbox to test the purchase of multiple items in a single transaction using a single payment.
- **Instant Payment Notification (IPN)**. Use the Sandbox to test IPN for updates and payment notifications.
- **Refunds:** Use the Sandbox to test refunding payments from a test buyer.
- **Subscriptions**: Use the Sandbox to test subscription buttons.

IMPORTANT: To execute test transactions on Sandbox you need to complete a purchase as a test buyer with your buyer test account. Typically, you go through your website purchase flow as a buyer. You must ensure that you execute your test on `www.sandbox.paypal.com` instead of `www.paypal.com`.

Website Payments with Buy Now Button

You can use the Sandbox to familiarize yourself with the PayPal **Buy Now** button, with which you can associate PayPal with a specific item you sell on your website.

To create a test **Buy Now** button:

1. From the **Test Accounts** tab, select a business account and click **Enter Sandbox Test Site**.
2. Go to the **Merchant Services** tab.
3. Select the **Buy Now Buttons** link under the **Key Features** heading to get to the Button Factory. You can also search the Help for “Button Factory.”
4. Follow the online instructions to create a Buy Now button. For more information, see the PayPal Payments Standard Integration Guide.
5. Copy and paste the code into your web page file wherever you would like the button image to appear. Typically, the button should be located next to the description of the item or service. Your web page does not have to be published to your web server for you to check the button placement; it can be on you own local hard drive.

IMPORTANT: You must change the form action to redirect to the Sandbox, using the following URL: `https://www.sandbox.paypal.com/cgi-bin/webscr" method="post"`

Use the PayPal Help link to answer related questions, such as "How do I make a Buy Now Button compatible with the Shopping Cart feature?" For general information, see https://www.paypal.com/pdn-item. For general information about shopping cart purchases, see https://www.paypal.com/shoppingcart. For general information about subscriptions, see https://www.paypal.com/pdn-recurring.

Encrypted Website Payments

The Sandbox also supports Encrypted Website Payments (EWP), as does the PayPal SDK console.

For information about what EWP is and how to use it, see the Paypal Payments Standard Integration Guide.

Testing Payments with Buy Now Button

For the purposes of testing the Buy Now button, your web page does not need to be published to your web server. It can reside on your local hard drive. However, you do need to be logged in to the Sandbox.

1. Log in to https://developer.paypal.com, click the **Test Accounts** tab, select the desired test account, and click **Enter Sandbox Test Site**.
2. Open the HTML file containing the Buy Now Button.
3. Click the **Buy Now** Button.
4. Log in using your test buyer account.
5. Follow the on-screen instructions to complete your test payment.

Verifying a Test Payment

1. Log in to https://developer.paypal.com and click the **Test Email** tab.

   Your Sandbox inbox shows payment confirmation email messages for the seller and buyer.
2. To further verify that the payment was successful:
   - Check your web server for IPN notifications related to the payment.
   - Launch the Sandbox as your test buyer or seller account and navigate to **My Account** > **Overview** to see the transaction in your **Recent Activity**.

Handling Pending Transactions

Transactions typically are credited to your PayPal account instantly after the buyer completes the transaction; however, a buyer might select a payment method that is not completed instantly. In these cases, the transaction goes into a pending state and the transaction is completed after a couple of days. The following sections describe how to set up pending status transactions that can either be completed or canceled.

Creating a Pending Transaction

1. Log in to https://developer.paypal.com, click the **Test Accounts** tab, select a buyer (personal or premier) test account, and click **Enter Sandbox Test Site**.
2. Log in to your test buyer account and create a transaction, such as one created using a Buy Now button or by passing parameters in the URL as in the following example:

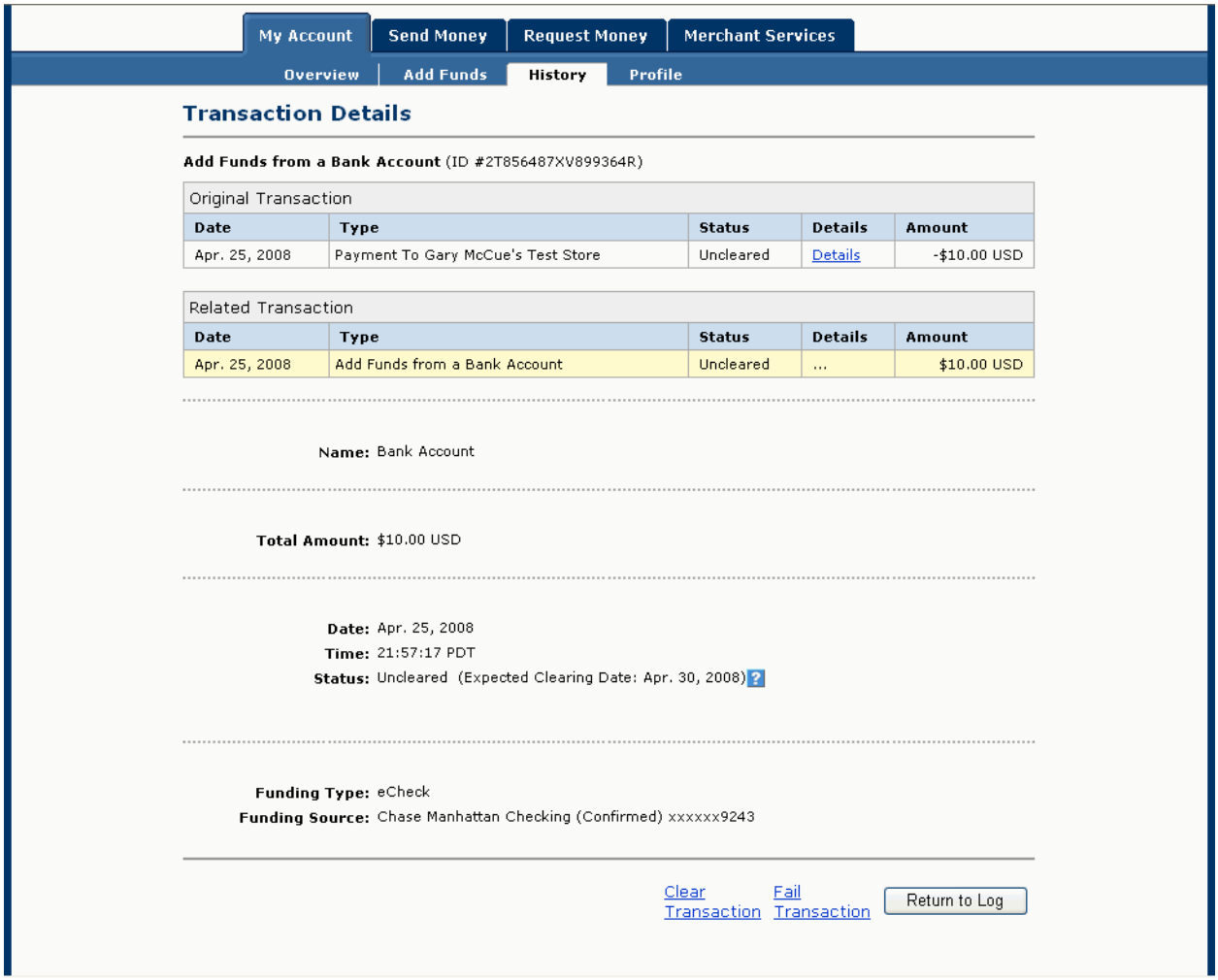
```
https://www.sandbox.paypal.com/
us/cgi-bin/webscr?cmd=_xclick&business=seller@domain.com
```

3. On the **Review Purchase Page** click on the link **Change** under funding method.
4. Select **eCheck** as the funding method and click **Continue**.
5. Click **Pay** to create the transaction.

   To verify the creation of the transaction, see "Verifying a Test Payment" on page 28.

Completing or Canceling a Pending Transaction

1. In the buyer's transactions log, click the **Details** link (in the Details column).
2. In the Transaction Detail window, there are two links to simulate actual bank clearing. These links appear only in the Sandbox, as shown below:
   - **Clear Transaction:** Click to complete the transaction.
   - **Fail Transaction:** Click to cancel the transaction.



Verifying a Test Refund

1. Log in to https://developer.paypal.com.
2. Click the **Test Email** tab.

   Your Sandbox inbox shows refund confirmation email messages for the seller and buyer.
3. To further verify that the refund was successful:
   - Check your Web server for IPN notifications related to the refund.
   - Launch the Sandbox as your test buyer or seller account and navigate to **My Account** > **Overview** to see the transaction in your **Recent Activity**.

Transferring Funds to a Test Account

To transfer funds to a test account:?

1. After logging into https://developer.paypal.com, select a test account and click **Enter Sandbox Test Site**
2. Navigate to **My Account** > **Add Funds**.?
3. Click the Transfer funds from a Bank Account link.?
4. On the Add Funds by Electronic Funds Transfer page:?
   - Select the bank account from which the funds are coming in the From drop-down list.?
   - Enter the amount to transfer in the Amount box.?
   - Click Continue.
5. On the resulting Add Funds Confirmation page, click **Submit**.?

   Navigate to **My Account** > **Overview** to see that the transfer transaction is listed.?

Clearing or Failing Test eCheck Transactions

When you use eCheck to transfer funds or send payments, the transaction appears as pending until you manually clear or fail it. Manual clearing is only necessary in the Sandbox.

To clear or fail test eCheck transactions:

1. In the transactions log, click the **Details** link (in the Details column).
2. In the Transaction Detail window, there are two links to simulate actual bank clearing. These links appear only in the Sandbox:
   - **Clear Transaction:** Click to complete the transaction.
   - **Fail Transaction:** Click to cancel the transaction.
3. Click **Return to Log** to see the transfer completed and the money in the Sandbox account.

   The **My Account** > **Overview** page opens.
4. Click the **View Limits** links on the **My Account** > **Overview** page to see the spending limits for the current test account.

   For an alternative example, see "Completing or Canceling a Pending Transaction" on page 29.

Sending Funds to a Seller

To purchase goods or services, a PayPal user must send funds to a seller. In the PayPal Sandbox, you can simulate the actions of a buyer by manually initiating the payment of funds. You must use a Personal test account to represent the buyer.

To send funds from one test account to another:

1. Log in to https://developer.paypal.com, click the **Test Accounts** tab, select a test account, and click **Enter Sandbox Test Site**.
2. Navigate to the **Send Money** tab.
3. On the Send Money page, enter the email address (PayPal account name) for the test account in Recipient's Email box.
4. Enter the amount to send to the seller's test account in the Amount box.
5. Select the currency for the funds in the **Currency** drop-down list. (Note: **Auction** is not an option in the drop-down list.)
6. Select the reason for sending the funds in the **Type** drop-down list.
7. Enter text in the Subject box, if you want to. This text is the subject of the email sent to the recipient about the transfer of funds.
8. Enter text in the **Note** memo box. This text appears in the body of the notification email.
9. Click **Continue**. This does not send the money; a confirmation step follows.
10. On the **Check Payment Details** page, review the transaction details for correctness. You can click **More Funding Options** to change the source of fund used for payment.
11. Click **Send Money**. This triggers the actual transfer of funds.
12. Your **Test Email** tab contains all the email messages that are sent to the test account sending the money and the test account receiving the money. See "Test Email" on page 12.

    Log in as the seller test account and navigate to the My Account > Overview tab to see the transaction for the recipient's account.

Billing A Customer

PayPal business users can bill another PayPal user for the purchase of goods or services. In PayPal terminology, the feature to bill a customer is called Request Money. In the PayPal Sandbox, you can manually initiate a request for funds from a test account. One test account is the seller. The other test account is the buyer.

To request funds from a buyer:

1. Log in to https://developer.paypal.com, click the **Test Accounts** tab, select a test account for which funds are requested, and click **Enter Sandbox Test Site**.
2. Navigate to the **Request Money** tab.
3. On the **Request Money** page, enter the email address (PayPal login name) for the test account being billed in the **Recipient's Email** box.
4. Enter the billed amount in the **Amount** box.
5. Select the currency for the funds in the **Currency** drop-down list.
6. Select the reason for the request for funds (billing) in the **Type** drop-down list. (Note: **Auction** is not an option in the drop-down list.)
7. Enter text in the **Subject** box. This text is the subject of the email sent to the recipient regarding the sent funds.
8. Enter text in the **Note** memo box. This text appears in the body of the notification email.
9. Click **Continue**.
10. On the **Request Money – Confirm** page, click **Request Money**. This triggers the actual request for funds.
11. Navigate to the **My Account** > **Overview** tab. The request for money should be listed.
12. Log in as the buyer and navigate to the **My Account** > **Overview** tab to see the transaction for the buyer's test account. The transaction for the request for money appears on the My **Account** > **Overview** tab with Pay and Cancel buttons. Click Pay, and in the confirmation window, click Send Money. This completes the transfer of requested funds.

    To view the email messages sent to both test accounts, select the **Test Email** tab. For details about your Sandbox email, see "Test Email" on page 12.

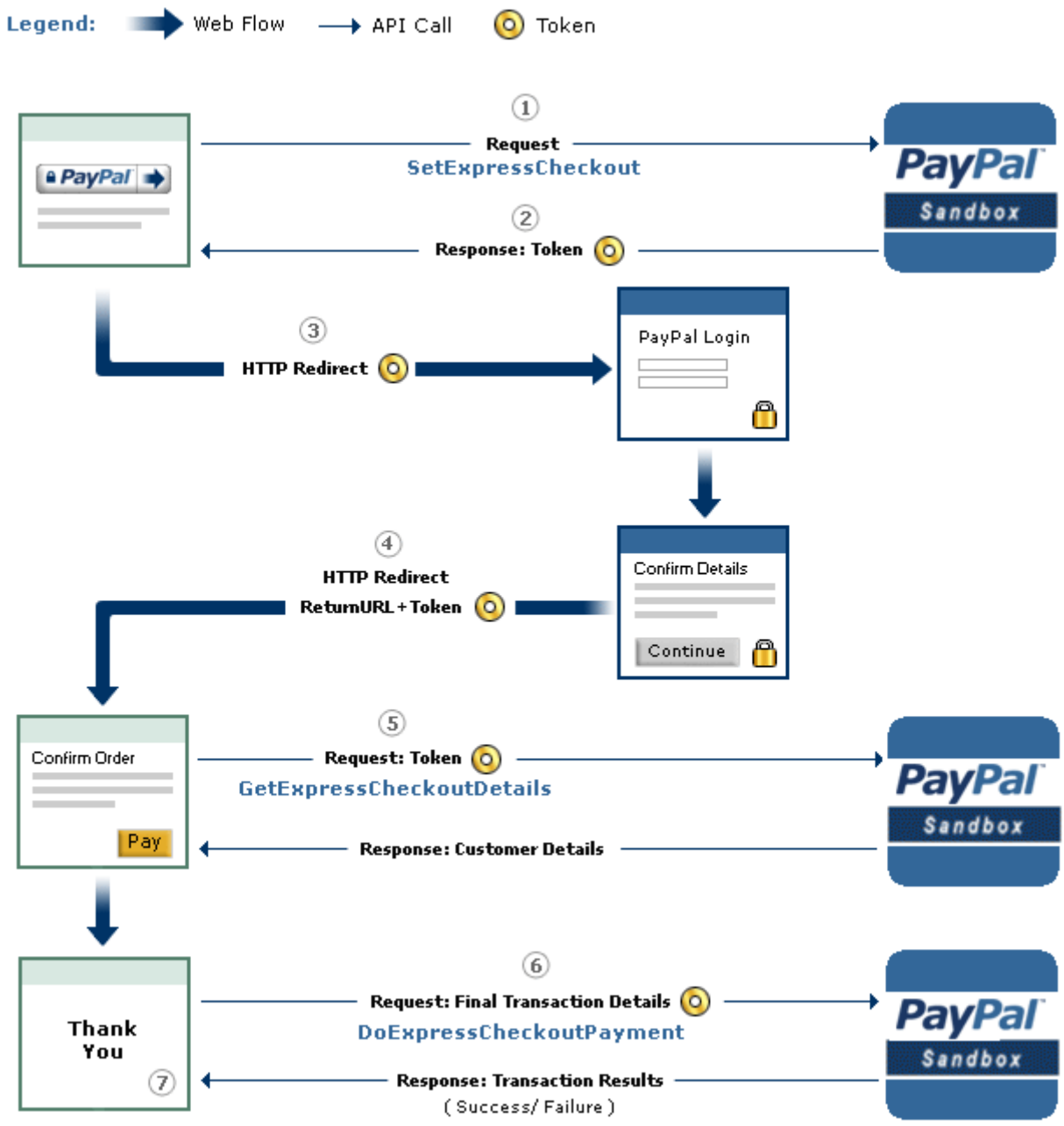
5 Testing an Express Checkout Integration

You can test your Express Checkout integration in the Sandbox.

This example shows how to simulate your web pages using HTTP forms and supplying the values for API operations from these forms. You can use this strategy for your initial testing; however, for more complete testing, you will want to replace these forms with your web pages containing actual code.

The following diagram shows the Express Checkout execution flow, which uses the Sandbox as the API server. The pages on the left represent your site.

Express Checkout Execution Flow



The following steps match the circled numbers in the diagram. Perform the actions in each step to test Express Checkout.

1. Invoke a form on your site that calls the `SetExpressCheckout` API on the Sandbox.

To invoke the API, set form fields whose names match the NVP names of the fields you want to set, specify their corresponding values, and then post the form to a PayPal Sandbox server,

such as https://api-3t.sandbox.paypal.com/nvp, as shown in the following example:

```
<form method=post action=https://api-3t.sandbox.paypal.com/nvp>
<input type=hidden name=USER value= API_username>
<input type=hidden name=PWD value= API_password>
<input type=hidden name=SIGNATURE value= API_signature>
<input type=hidden name=VERSION value=2.3>
<input type=hidden name=PAYMENTACTION value=Authorization>
<input name=AMT value=19.95>
<input type=hidden name=RETURNURL
   value=http://www.YourReturnURL.com>
<input type=hidden name=CANCELURL
   value=http://www.YourCancelURL.com>
<input type=submit name=METHOD value=SetExpressCheckout>
</form>
```

NOTE: The API username is a Sandbox business test account for which a signature exists. See the Test Certificates tab of the Sandbox to obtain a signature. If you are not using a signature, you must use a different Sandbox server.

2. Review the response string from the SetExpressCheckout API operation.

   PayPal responds with a message, such as the one shown below. Note the status, which should include ACK set to Success, and a token that is used in subsequent steps.

```
   TIMESTAMP=2007%2d04%2d05T23%3a23%3a07Z
&CORRELATIONID=63cdac0b67b50   &ACK=Success
&VERSION=2%2e300000&BUILD=1%2e0006   &TOKEN=EC%2d1NK66318YB717835M
```

3. If the operation was successful, use the token and redirect your browser to the Sandbox to log in, as follows:

```
   https://www.sandbox.paypal.com/cgi-bin/webscr?
cmd=_express-checkout    &token=EC-1NK66318YB717835M
```

   You may need to replace hexadecimal codes with ASCII codes; for example, you may need to replace %2d in the token with a hyphen (-).

   You must log in to https://developer.paypal.com before you log in to a Sandbox test account. You then log in to the test account that represents the buyer, not the API_username business test account that represents you as the merchant.

4. After logging into the buyer test account, confirm the details.

   When you confirm, the Sandbox redirects your browser to the return URL you specified when invoking the SetExpressCheckout API operation, as in the following example:

```
   http://www.YourReturnURL.com/
                ?token=EC-1NK66318YB717835M&PayerID=7AKUSARZ7SAT8
```

5. Invoke a form on your site that calls the `GetExpressCheckoutDetails` API operation on the Sandbox:

```
<form method=post action=https://api-3t.sandbox.paypal.com/nvp
<input type=hidden name=USER value=API_username>
<input type=hidden name=PWD value=API_password>
<input type=hidden name=SIGNATURE value=API_signature>
<input type=hidden name=VERSION value=2.3>
<input name=TOKEN value=EC-1NK66318YB717835M>
<input type=submit name=METHOD value=GetExpressCheckoutDetails>
</form>
```

If the operation was successful, the `GetExpressCheckoutDetails` API returns information about the payer, such as the following information:

```
TIMESTAMP=2007%2d04%2d05T23%3a44%3a11Z
&CORRELATIONID=6b174e9bac3b3      &ACK=Success
&VERSION=2%2e300000
&BUILD=1%2e0006    &TOKEN=EC%2d1NK66318YB717835M
&EMAIL=YourSandboxBuyerAccountEmail
&PAYERID=7AKUSARZ7SAT8
&PAYERSTATUS=verified
&FIRSTNAME=...
&LASTNAME=...
&COUNTRYCODE=US
&BUSINESS=...
&SHIPTONAME=...
&SHIPTOSTREET=...
&SHIPTOCITY=...
&SHIPTOSTATE=CA
&SHIPTOCOUNTRYCODE=US
&SHIPTOCOUNTRYNAME=United%20States
&SHIPTOZIP=94666
&ADDRESSID=...
&ADDRESSSTATUS=Confirmed
```

6. Invoke a form on your site that invokes the `DoExpressCheckoutPayment` API operation on the Sandbox:

```
<form method=post action=https://api-3t.sandbox.paypal.com/nvp>
<input type=hidden name=USER value= API_username>
<input type=hidden name=PWD value= API_password>
<input type=hidden name=SIGNATURE value= API_signature>
<input type=hidden name=VERSION value=2.3>
<input type=hidden name=PAYMENTACTION value=Authorization>
<input type=hidden name=PAYERID value=7AKUSARZ7SAT8>
<input type=hidden name=TOKEN value= EC%2d1NK66318YB717835M>
<input type=hidden name=AMT value= 19.95>
<input type=submit name=METHOD value=DoExpressCheckoutPayment>
</form>
```

7. Review the response string from the `DoExpressCheckoutPayment` API operation.

   If the operation was successful, the response should include `ACK` set to `Success`, as follows:

```
    TIMESTAMP=2007%2d04%2d05T23%3a30%3a16Z
&CORRELATIONID=333fb808bb23     &ACK=Success
&VERSION=2%2e300000
&BUILD=1%2e0006   &TOKEN=EC%2d1NK66318YB717835M
&TRANSACTIONID=043144440L487742J
&TRANSACTIONTYPE=expresscheckout
&PAYMENTTYPE=instant
&ORDERTIME=2007%2d04%2d05T23%3a30%3a14Z
&AMT=19%2e95
&CURRENCYCODE=USD
&TAXAMT=0%2e00
&PAYMENTSTATUS=Pending
&PENDINGREASON=authorization
&REASONCODE=None
```

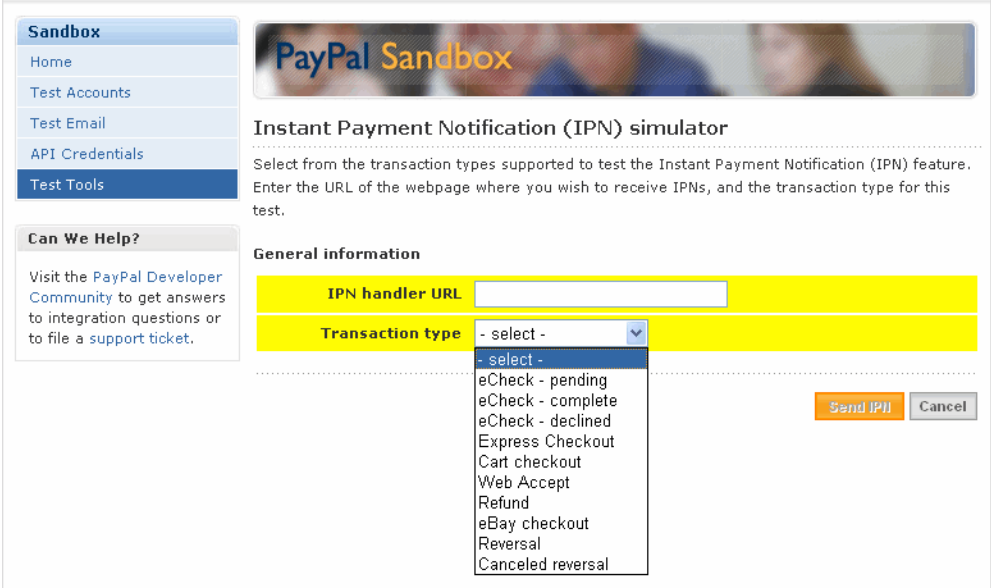
5 Testing an Express Checkout Integration

6 Sandbox Test Tools

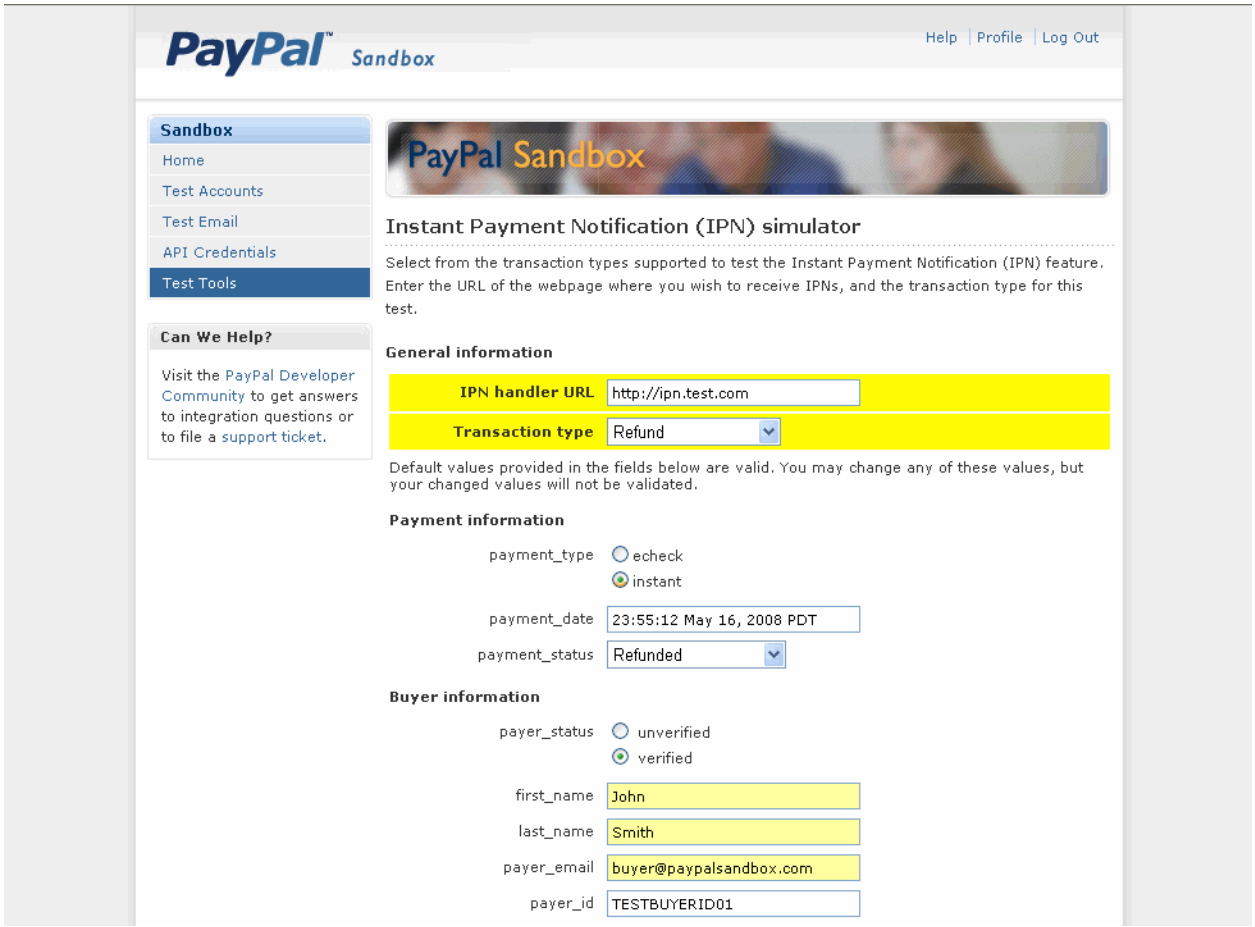
Instant Payment Notification Simulator

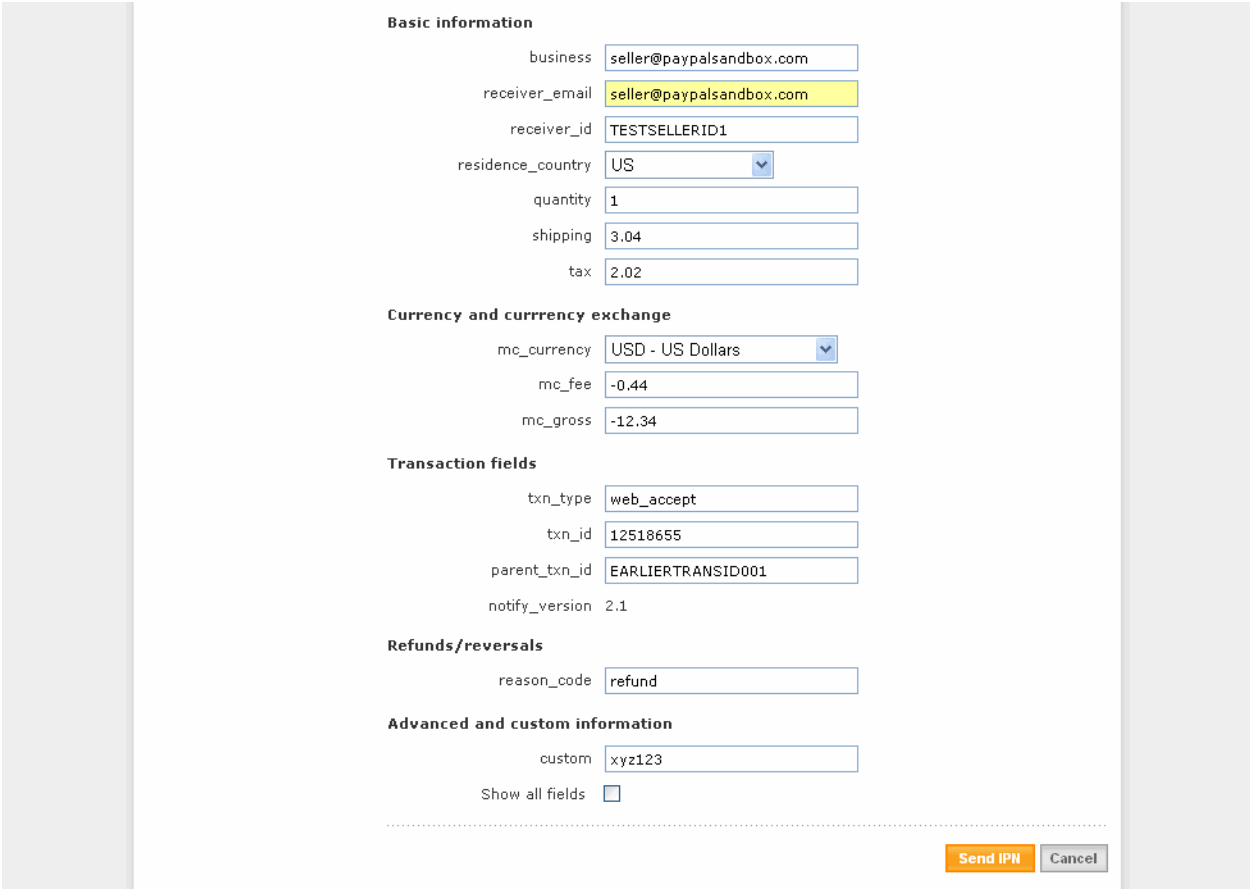
You can use the Instant Payment Notification (IPN) Simulator to send IPNs to the URL that you set up to receive them. You can use this tool to verify that you are receiving IPNs correctly.

To set up and send an IPN, select **Instant Payment Notification (IPN) simulator** from Test Tools. You can enter the URL to receive the notification and the kind of notification on the following screen:



When you select the kind of transaction that you want to test, a form containing test data appears:


PayPal Sandbox
Help | Profile | Log Out
Sandbox
Home
Test Accounts
Test Email
API Credentials
Test Tools
Can We Help?
Visit the PayPal Developer Community to get answers to integration questions or to file a support ticket.
PayPal Sandbox
Instant Payment Notification (IPN) simulator
Select from the transaction types supported to test the Instant Payment Notification (IPN) feature. Enter the URL of the webpage where you wish to receive IPNs, and the transaction type for this test.
General information
IPN handler URL
http://ipn.test.com
Transaction type
Refund
Default values provided in the fields below are valid. You may change any of these values, but your changed values will not be validated.
Payment information
payment_type
echeck
instant
payment_date
23:55:12 May 16, 2008 PDT
payment_status
Refunded
Buyer information
payer_status
unverified
verified
first_name
John
last_name
Smith
payer_email
buyer@paypalsandbox.com
payer_id
TESTBUYERID01



You can modify the fields that you want to include in the IPN; however, the simulator does not check the validity of any field that you change.

NOTE: By default, only populated fields are displayed. You can check the `Show all fields` box to view all fields.

After you have viewed or modified the fields to be sent, click **Send IPN**. The results of the operation are displayed at the top of the page.

Testing IPN Messages in the Sandbox

After you use the IPN simulator, you should test actual notifications in the Sandbox as well. The only difference between a test IPN message and a live IPN message is that PayPal includes a `test_ipn` variable in the IPN message. To set up your Sandbox account to handle IPNs outside of the test tool, click **Enter Sandbox Test Site** from your test account and proceed as if you are using a live account. See Instant Payment Notification Guide for more information.

7 Testing Error Conditions

In default operation, the Sandbox mimics the live PayPal site as closely as possible, which means that an error can be replicated only by creating the exact conditions and sequence of events to raise an error. This *positive test* environment is well-suited for testing logic that follows the typical error-free path; however, it can be difficult to raise error conditions and test logic to handle errors.

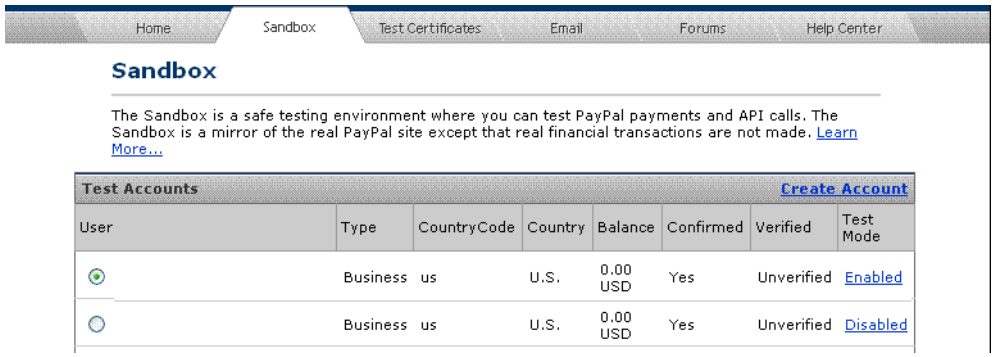
The Sandbox can be set to allow *negative testing*, which enables you to simulate an error. You can test against the following kinds of errors:

- errors that result from calling a PayPal API
- address verification and credit card validation errors that occur when using Virtual Terminal or calling `DoDirectPayment`.

IMPORTANT: Negative testing is only available for Version 2.4 and later of PayPal APIs.

You raise an error condition by setting a value in a field passed to an API or setting a value in a field submitted to Virtual Terminal. The value triggers a specific error condition. Negative testing is available only in the Sandbox; you cannot force or simulate an error on the live site.

You must create a Business test account and enable negative testing; otherwise, setting a value in the API or transaction will not raise an error unless the error would be raised in the default positive test environment. To enable negative testing, set **Test Mode** to **Enabled**. The following screen shows two Business accounts. The first test account enables negative testing; the second account disables negative testing.



To test Virtual Terminal, you must set risk controls for address verification and credit card security, respectively, to **Decline** or **Accept and Report** depending on the kind of negative testing you want to perform. If you do not set the appropriate risk controls, default processing occurs, which is to accept the transaction.

Severe error conditions, such as bad arguments or invalid login, preempt negative testing because the error cannot be handled by either negative testing or positive testing. In these

cases, the error condition for positive testing is raised, regardless of whether the account was enabled for negative testing.

API Testing

For APIs, you trigger an error condition by setting a field to the value of the error you want to trigger. The value you specify depends on the kind of field:

- for amount-related fields, specify a value as a number with two digits to the right of the decimal point; for example, 107.55 triggers PP API error 10755
- for other kinds of fields, specify the actual PP API error; for example, 10755 triggers PP API error 10755

The following table identifies the API, the NVP name or SOAP element of the field that triggers the error, and a description of how to set the value in the field:

API Name	NVP Field Name	SOAP Element	Description
RefundTransaction	AMT	Amount	Specify the error code to trigger as all digits in a number with two digits to the right of the decimal point; for example, 107.55 triggers PP API error code 10755.
GetTransaction Details	TRANSACTIONID	TransactionID	Specify the error code to trigger as all digits in the field; for example, an ID of 10755 triggers PP API error code 10755.
TransactionSearch	INVNUM	InvoiceID	Specify the error code to trigger as all digits in the field; for example, an ID of 10755 triggers PP API error code 10755.
DoDirectPayment	AMT	OrderTotal	Specify the error code to trigger as all digits in a number with two digits to the right of the decimal point; for example, 107.55 triggers PP API error code 10755.
SetExpressCheckout	MAXAMT	MaxAmount	Specify the error code to trigger as all digits in a number with two digits to the right of the decimal point; for example, 107.55 triggers PP API error code 10755.
GetExpressCheckout Details	TOKEN	Token	Specify the error code to trigger as all digits in the field; for example, a token value of 10755 triggers PP API error code 10755.

API Name	NVP Field Name	SOAP Element	Description
DoExpressCheckoutPayment	TOKEN	Token	Specify the error code to trigger as all digits in the field; for example, a token value of 10755 triggers PP API error code 10755.
DoExpressCheckoutPayment November 2011	AMT (or) PAYMENTREQUEST_n_AMT	OrderTotal	Specify the error code to trigger as all digits in a number with two digits to the right of the decimal point; for example, 106.23 triggers PP API error code 10623.
DoCapture	AMT	Amount	Specify the error code to trigger as all digits in a number with two digits to the right of the decimal point; for example, 106.23 triggers PP API error code 10623.
DoVoid	AUTHORIZATIONID	AuthorizationID	Specify the error code to trigger as all digits in the field; for example, an ID of 10623 triggers PP API error code 10623.
DoReauthorization	AMT	Amount	Specify the error code to trigger as all digits in a number with two digits to the right of the decimal point; for example, 106.23 triggers PP API error code 10623.
DoAuthorization	AMT	Amount	Specify the error code to trigger as all digits in a number with two digits to the right of the decimal point; for example, 106.23 triggers PP API error code 10623.
MassPay	EMAILSUBJECT	EmailSubject	Specify the error code to trigger as all digits in the field; for example, a subject of 10755 triggers PP API error code 10755.
BillUser	AMT	Amount	Specify the error code to trigger as all digits in a number with two digits to the right of the decimal point; for example, 107.55 triggers PP API error code 10755.
BAUpdate Version 2.4	MPID	MpID	Specify the error code to trigger as all digits in the field; for example, an ID of 10755 triggers PP API error code 10755.

API Name	NVP Field Name	SOAP Element	Description
BAUpdate Version 3.0	REFERENCEID	ReferenceID	Specify the error code to trigger as all digits in the field; for example, an ID of 10755 triggers PP API error code 10755.
DoReferenceTransaction	AMT	OrderTotal	Specify the error code to trigger as all digits in a number with two digits to the right of the decimal point; for example, 107.55 triggers PP API error code 10755.
AddressVerify	—	—	Not supported for negative testing.

NOTE: If the trigger value is not a valid error code for the API being tested, positive testing occurs for the request, which might result in another error occurring.

Negative Testing Using an Amount-Related Trigger Field

Consider an example that sets up testing for error 10623 for DoAuthorization, in which the error code is specified in the AMT field:

```
METHOD=DoAuthorization
&TRANSACTIONID=O-1GU0288989807143B&  AMT=106.23&
TRANSACTIONENTITY=Order&
VERSION=2.4&
USER=username&
PWD=password&
SIGNATURE=signature
```

The request invokes the following response:

```
TIMESTAMP=2007%2d04%2d04T03%3a10%3a19Z&
CORRELATIONID=447d121150529&     ACK=Failure&  L_ERRORCODE0=10623&
L_SHORTMESSAGE0=Maximum%20number%20of%20authorization%20allowed%20for%20the
%20order%20is%20reached%2e&
L_LONGMESSAGE0=Maximum%20number%20of%20authorization%20allowed%20for%20the%
20order%20is%20reached%2e&    L_SEVERITYCODE0=Error&
VERSION=2%2e400000&
BUILD=1%2e0006
```

Here is an example that sets up testing for error 10606 for DoReferenceTransaction, in which the error code is specified in the SOAP OrderTotal field:

```
Method=DoReferenceTransactionReferenceID=B-8GP9699385999711K&
PaymentAction=Authorization&PaymentType=Any&   OrderTotal=106.06&
ItemTotal=106.06&
Quantity=1&
Amount currencyID="USD"=106.06&
```

The request invokes the following response:

```
Timestamp =2011-06-13T16:13:07Z&  Ack =Failure&  CorrelationID
=bacbc41933f33&  Errors ="urn:ebay:apis:eBLBaseComponents"&
ShortMessage=Buyer cannot pay.&  LongMessage=Transaction rejected, please
contact the buyer.&  ErrorCode=10606&  SeverityCode=Error&
```

Negative Testing Using a Non-Amount Trigger Field

Consider an example that sets up testing for error 10603 for `DoVoid`, in which the error code is specified in the `AUTHORIZATIONID` field:

```
METHOD=DoVoid&  AUTHORIZATIONID=10603&
VERSION=2.4&
USER=username&
PWD=password&
SIGNATURE=signature
```

The request invokes the following response:

```
TIMESTAMP=2007%2d04%2d04T03%3a10%3a22Z&
CORRELATIONID=51b0c5054dee6&  ACK=Failure&  L_ERRORCODE0=10603&
L_SHORTMESSAGE0=The%20buyer%20is%20restricted%2e&
L_LONGMESSAGE0=The%20buyer%20account%20is%20restricted%2e&
L_SEVERITYCODE0=Error
&VERSION=2%2e400000&
BUILD=1%2e0006
```

Negative Testing With Multiple Messages

Consider an example that sets up testing for error 10009 for `RefundTransaction`, which returns 14 possible error message sets:

```
METHOD=RefundTransaction&
TRANSACTIONID=asdf&
REFUNDTYPE=Partial&  AMT=100.09&
VERSION=2.4&
USER=username&
PWD=password&
SIGNATURE=signature
```

The request invokes the following response:

```
TIMESTAMP=2007%2d04%2d04T03%3a10%3a23Z&
CORRELATIONID=81ccc18eaec49&  ACK=Failure&  L_ERRORCODE0=10009&
L_SHORTMESSAGE0=Transaction%20refused&
L_LONGMESSAGE0=You%20can%20not%20refund%20this%20type%20of%20transaction&
L_SEVERITYCODE0=Error&  L_ERRORCODE1=10009&
L_SHORTMESSAGE1=Transaction%20refused&
L_LONGMESSAGE1=You%20are%20over%20the%20time%20limit%20to%20perform%20a%20r
efund%20on%20this%20transaction&  L_SEVERITYCODE1=Error&
L_ERRORCODE2=10009&  L_SHORTMESSAGE2=Transaction%20refused&
L_LONGMESSAGE2=Account%20is%20restricted&  L_SEVERITYCODE2=Error&  ...
L_ERRORCODE13=10009&  L_SHORTMESSAGE13=Transaction%20refused&
L_LONGMESSAGE13=The%20partial%20refund%20amount%20must%20be%20less%20than%2
0or%20equal%20to%20the%20remaining%20amount&  L_SEVERITYCODE13=Error&
VERSION=2%2e400000&
BUILD=1%2e0006
```

Testing Using AVS Codes

You can simulate address verification by triggering an AVS error code when you call `DoDirectPayment` or use Virtual Terminal. To specify a code, place AVS_*code* in the NVP STREET field or the `Street1` SOAP element when you call DoDirectPayment, where *code* is an AVS code, or enter AVS_*code* in Address Line 1 when using Virtual Terminal. For example, if you set `123 AVS_A Street` in the NVP STREET field, AVS code A is set.

NOTE: AVS_*code* is case sensitive; all characters must be uppercase. For example, AVS_A is valid trigger; `avs_a` is not.

The following table identifies valid AVS codes, corresponding triggers, and a description of each error condition:

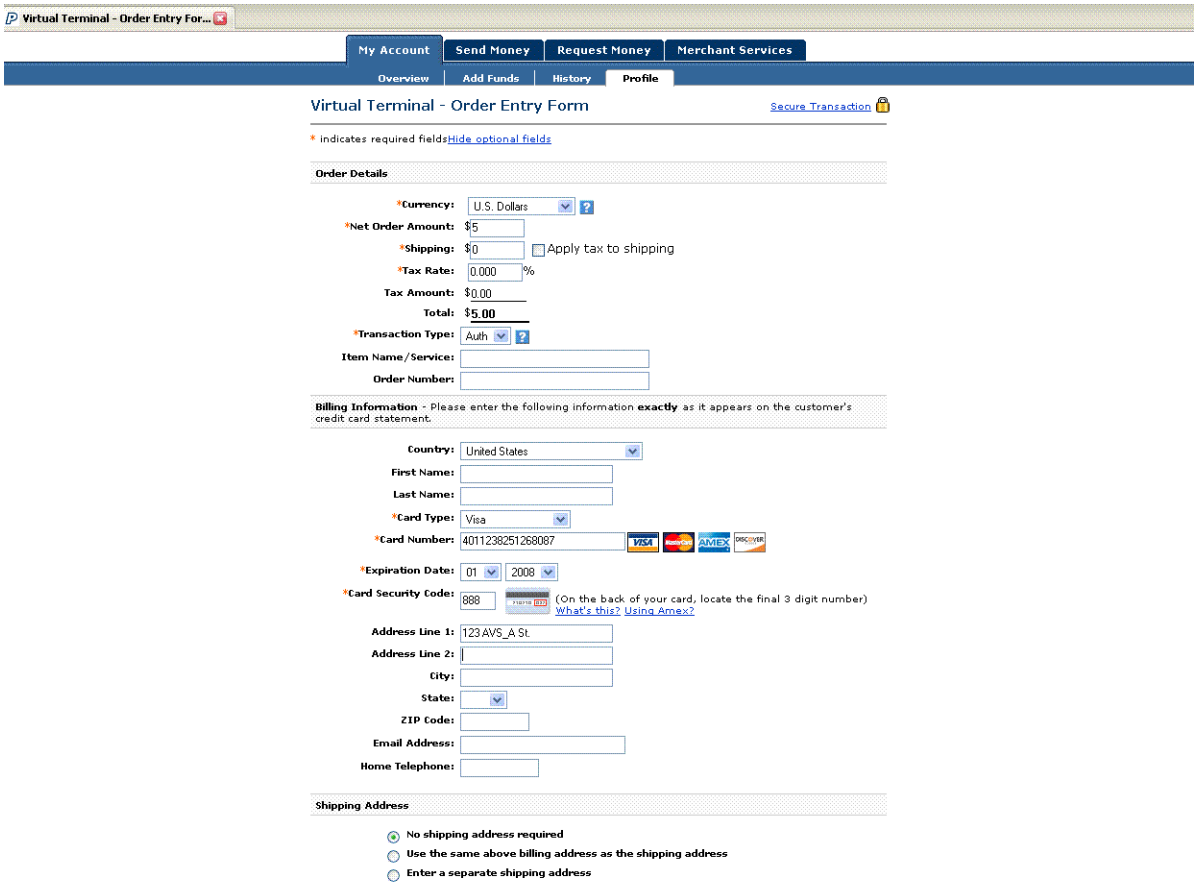
AVS Code	Trigger	Description of Error
A	AVS_A	The address matches but no zip code is specified; results in an error if the "Partial Address Match" risk control is set.
B	AVS_B	The international address matches but no zip code is specified; results in an error if the "Partial Address Match" risk control is set.
D	AVS_D	Exact match (no error). The international address and postal code matches.
F	AVS_F	Exact match (no error). The UK address and postal code matches.
P	AVS_P	The postal code matches but no address is specified; results in an error if the "Partial Address Match" risk control is set.
W	AVS_W	The 9-digit zip code matches but no address is specified; results in an error if the "Partial Address Match" risk control is set.
X	AVS_X	Exact match (no error). The complete address and 9-digit zip code matches.

AVS Code	Trigger	Description of Error
Y	AVS_Y	Exact match (no error). The complete address and 5-digit zip code matches.
Z	AVS_Z	The 5-digit zip code matches but no address is specified; results in an error if the "Partial Address Match" risk control is set.
N	AVS_N	No address information; results in an error if the "No Address Match" risk control is set.
C	AVS_C	No address information for an international address; results in an error if the "No Address Match" risk control is set.
E	AVS_E	Not allowed for MOTO (internet/phone) transactions.
I	AVS_I	Service unavailable internationally; results in an error if the "Service Unavailable/Unsupported" risk control is set.
G	AVS_G	Service globally unavailable; results in an error if the "Service Unavailable/Unsupported" risk control is set.
R	AVS_R	Retry; results in an error if the "Service Unavailable/Unsupported" risk control is set.
S	AVS_S	Service not supported; results in an error if the "Service Unavailable/Unsupported" risk control is set.
U	AVS_U	Service unavailable; results in an error if the "Service Unavailable/Unsupported" risk control is set.

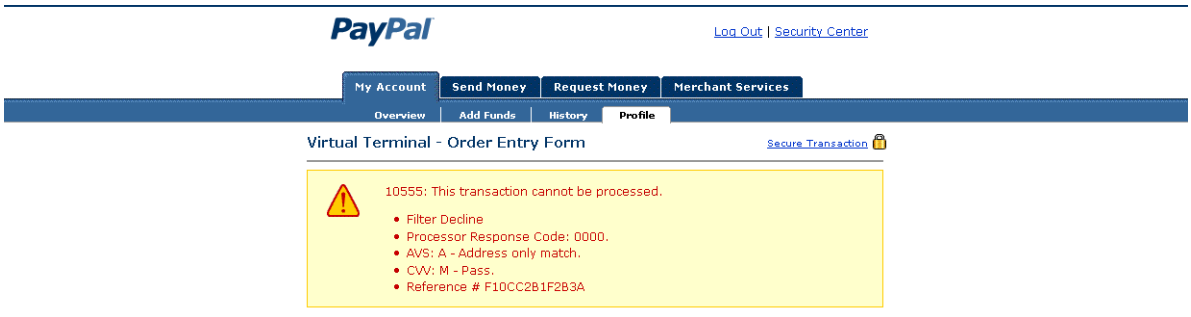
NOTE: The specified AVS code is set, regardless of whether a PP API error code is set. If no AVS code is specified or the AVS risk control is not specified, AVS code X is returned.

Testing an AVS Code Using Virtual Terminal

Consider an example of testing for AVS code A using Virtual Terminal. You enter AVS_A in the **Address Line 1** field:



When you attempt to process the transaction, the following message appears:



Testing an AVS Code Using DoDirectPayment

Consider an example that sets up testing for AVS code `A` and error code 10755 in `DoDirectPayment`, for which AVS code `A` indicates no zip code is specified and results in an error if the “Partial Address Match” risk control is set, whether or not other errors occur:

```
METHOD=DoDirectPayment&
CREDITCARDTYPE=VISA&
ACCT=4683075410516684&
EXPDATE=112007&
CVV2=808&  AMT=107.55&
FIRSTNAME=Designer&
LASTNAME=Fotos&
IPADDRESS=255.55.167.002&  STREET=1234%20AVS_A%20Street&
CITY=San%20Jose&
STATE=CA&
COUNTRY=United%20States&
ZIP=95110&
COUNTRYCODE=US&
SHIPTONAME=Louise%20P.%20Flowerchild&
SHIPTOSTREET=1234%20Easy%20Street&
SHIPTOSTREET2=Apt%2022%20bis&
SHIPTOCITY=New%20Orleans&
SHIPTOSTATE=LA&
SHIPTOCOUNTRY=US&
SHIPTOZIP=70114&
PAYMENTACTION=Authorization&
FIZBIN=foo&
VERSION=2.4&
USER=username&
PWD=password&
SIGNATURE=Aq9tJJ3ndj7r32JgX.qAzqOoC1JJAM7erWun-CUZYFDtxffpKWU4ERQG
```

The request invokes the following response:

```
TIMESTAMP=2007%2d04%2d04T03%3a35%3a10Z&
CORRELATIONID=a7cbf2d4d83dc&  ACK=Failure&  L_ERRORCODE0=10555&
L_SHORTMESSAGE0=Filter%20Decline&
L_LONGMESSAGE0=This%20transaction%20cannot%20be%20processed%2e&
L_SEVERITYCODE0=Error&  L_ERRORCODE1=10755&
L_SHORTMESSAGE1=Unsupported%20Currency%2e&
L_LONGMESSAGE1=This%20transaction%20cannot%20be%20processed%20due%20to%20an
%20unsupported%20currency%2e&  L_SEVERITYCODE1=Error&
VERSION=2%2e400000&
BUILD=1%2e0006
```

Testing Using CVV Codes

You can simulate credit card validation by triggering a CVV error code when you call `DoDirectPayment` or use Virtual Terminal. To specify a CVV code, place a trigger value in the NVP `CVV2` field or the `CVV2` SOAP element when you call DoDirectPayment, or enter the trigger in **Card Security Code** when using Virtual Terminal.

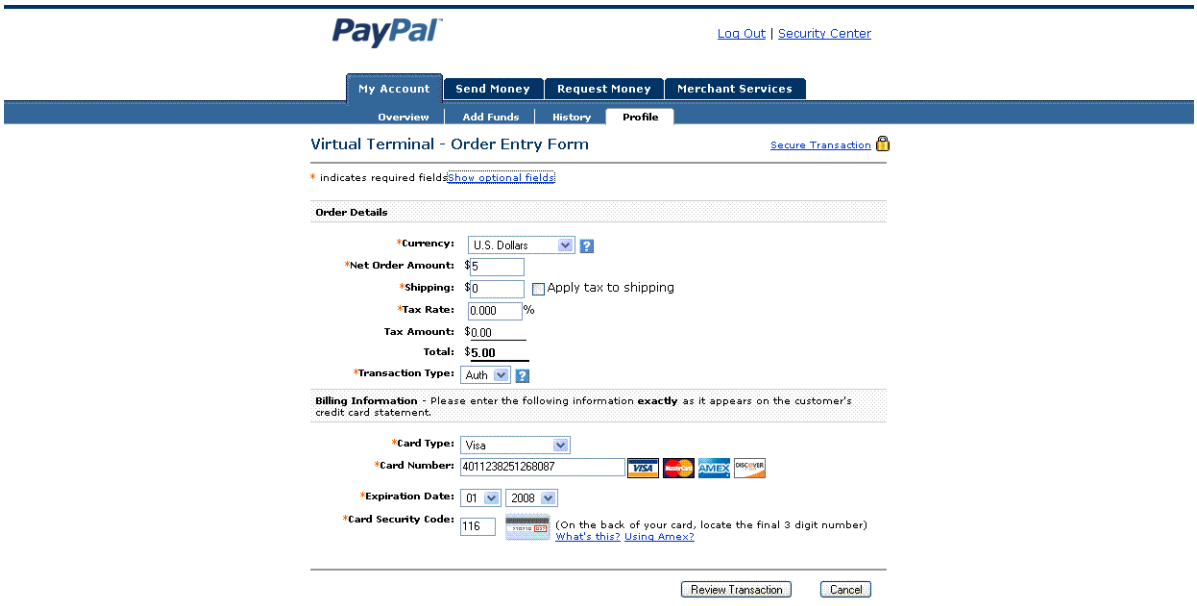
The following table identifies valid CVV codes, corresponding triggers, and a description of each error condition:

CVV Code	Trigger	Description of Error
M	115	CVV2 matches (no error).
N	116	CVV2 does not match.
U	125	Service unavailable.
S	123	Service not supported.
P	120	Transaction not processed.
X	130	No response.

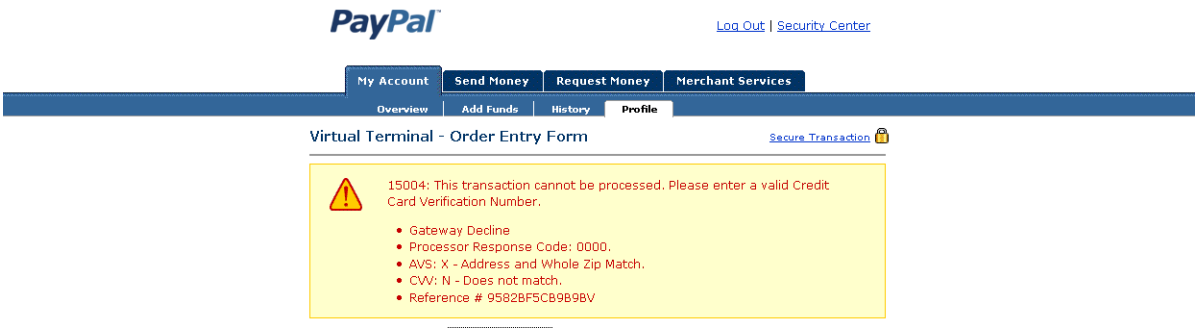
NOTE: The specified CVV2 code is set, regardless of whether a PP API error code is set. If no CVV2 code is specified, M is returned. Virtual Terminal only displays the CVV2 error if the risk control blocks the payment.

Testing a CVV Code Using Virtual Terminal

Consider an example of testing for CVV code N using Virtual Terminal. You enter 116 in the **Card Security Code** field:



When you attempt to process the transaction, the following message appears:



NOTE: Other errors are also reported in addition to CVV code `N`.

Testing a CVV Code Using DoDirectPayment

Consider an example that sets up testing for CCV code `N` in `DoDirectPayment`, which indicates a mismatch in the card validation code:

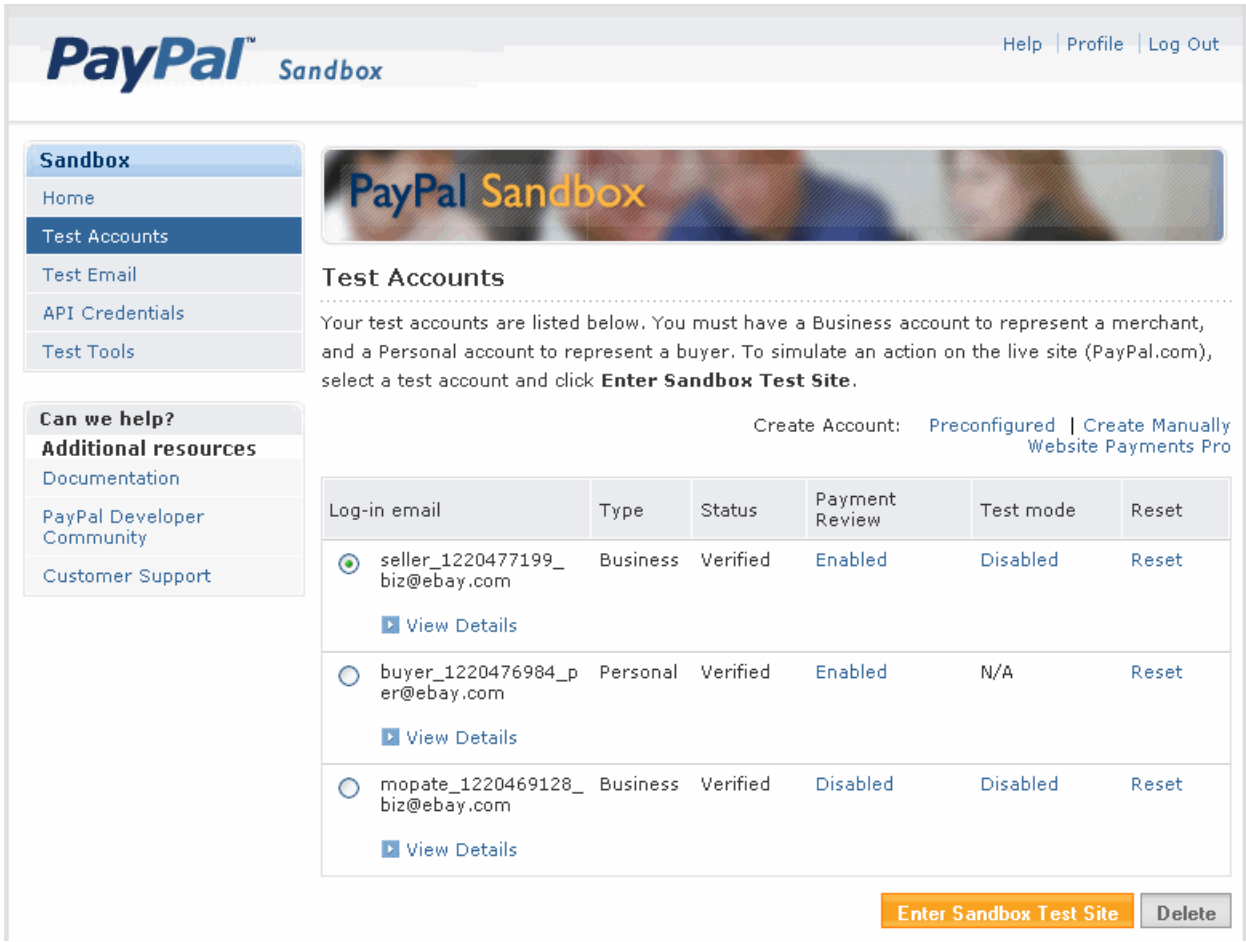
```
METHOD=DoDirectPayment&
CREDITCARDTYPE=VISA&
ACCT=4683075410516684&
EXPDATE=112007&  CVV2=116&
AMT=1.55&
FIRSTNAME=Designer&
LASTNAME=Fotos&
IPADDRESS=255.55.167.002&
STREET=1234%20Easy%20Street&
CITY=San%20Jose&
STATE=CA&
COUNTRY=United%20States&
ZIP=95110&
COUNTRYCODE=US&
SHIPTONAME=Louise%20P.%20Flowerchild&
SHIPTOSTREET=1234%20Easy%20Street&
SHIPTOSTREET2=Apt%2022%20bis&
SHIPTOCITY=New%20Orleans&
SHIPTOSTATE=LA&
SHIPTOCOUNTRY=US&
SHIPTOZIP=70114&
PAYMENTACTION=Authorization&
FIZBIN=foo&
VERSION=2.4&
USER=username&
PWD=password&
SIGNATURE=signature
```

The request invokes the following response:

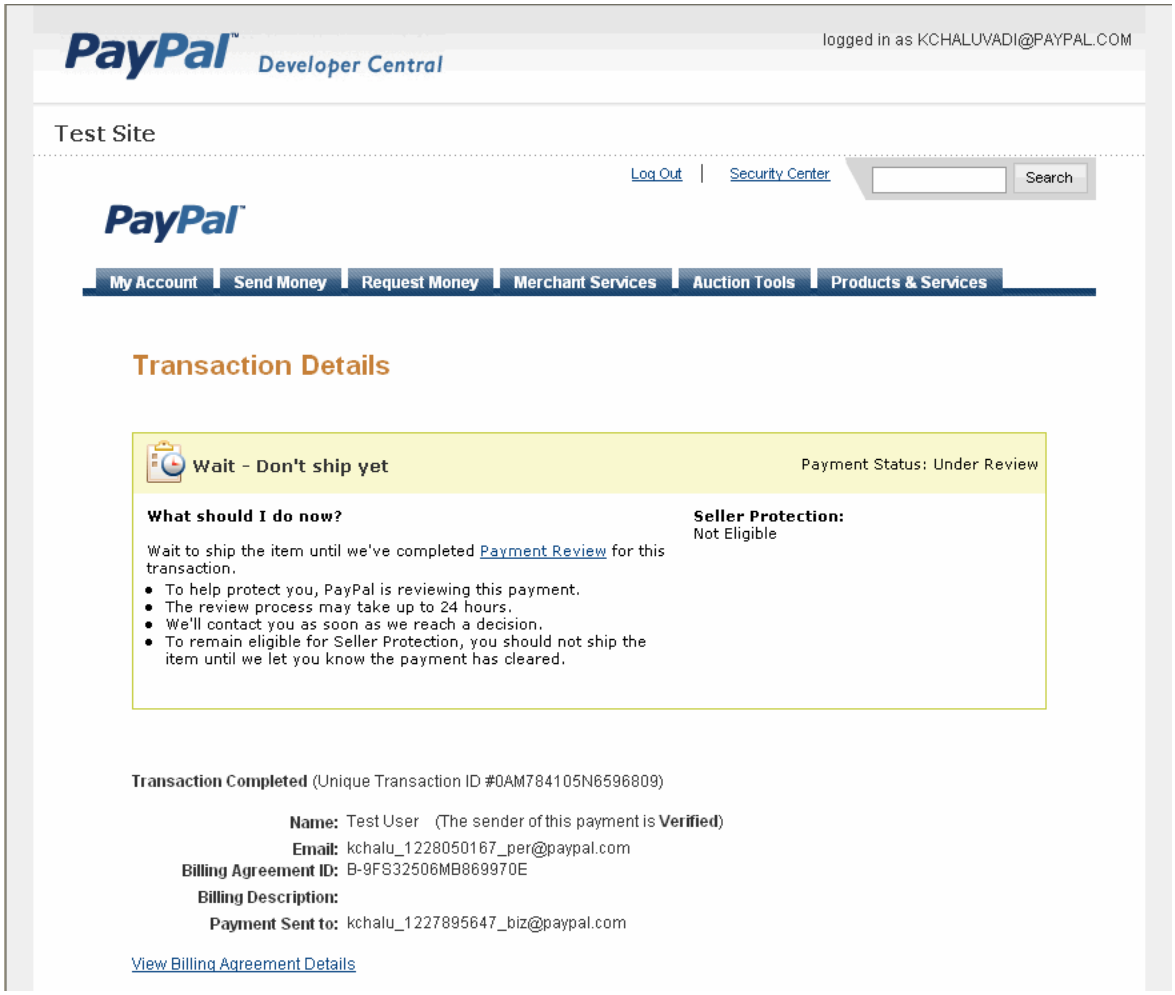
```
TIMESTAMP=2007%2d04%2d04T03%3a35%3a12Z&
CORRELATIONID=2499856319532&  ACK=Failure&  L_ERRORCODE0=15004&
L_SHORTMESSAGE0=Gateway%20Decline&
L_LONGMESSAGE0=This%20transaction%20cannot%20be%20processed%2e%20Please%20e
nter%20a%20valid%20Credit%20Card%20Verification%20Number%2e&
L_SEVERITYCODE0=Error&
VERSION=2%2e400000&
BUILD=1%2e0006
```

8 Testing Payment Review

On the live site, payment review is always active, which means that PayPal reviews payments automatically for various risk factors. In the Sandbox, all transactions pass payment review by default. If you want to simulate payment review, you can enable it from the Test Accounts page, as shown on the following screen:



When payment review is enabled, all transactions become pending, as shown below:


PayPal Developer Central
logged in as KCHALUVADI@PAYPAL.COM
Test Site
Log Out | Security Center
Search
PayPal
My Account | Send Money | Request Money | Merchant Services | Auction Tools | Products & Services
Transaction Details
Wait - Don't ship yet
Payment Status: Under Review
What should I do now?
Wait to ship the item until we've completed Payment Review for this transaction.
To help protect you, PayPal is reviewing this payment.
The review process may take up to 24 hours.
We'll contact you as soon as we reach a decision.
To remain eligible for Seller Protection, you should not ship the item until we let you know the payment has cleared.
Seller Protection:
Not Eligible
Transaction Completed (Unique Transaction ID #0AM784105N6596809)
Name: Test User (The sender of this payment is Verified)
Email: kchalu_1228050167_per@paypal.com
Billing Agreement ID: B-9FS32506MB869970E
Billing Description:
Payment Sent to: kchalu_1227895647_biz@paypal.com
View Billing Agreement Details

9 Technical Support

Depending on the PayPal product you need assistance with, contact either Customer Service or Developer Technical Support.

Contacting Customer Service for Live PayPal Website Help

Use PayPal Help to find an answer to any problem you might encounter with live products such as Website Payments or Instant Payment Notification.

To contact Customer Service about issues with the Live PayPal website:

1. Go to https://paypal.com/.
2. Click **Help** in the upper right corner of the page.
3. Click **Contact Us** in the lower left of the page.
4. Chose either **Help by Email** or **Help by Phone.**
5. Follow the remaining instructions.

Contacting Developer Technical Support for API Help

For information about PayPal Web Services API, Developer Central, and using the Sandbox, refer to the following resources:

- **Help Center**: In Developer Central, click **Help Center** to access developer manuals and links.
- **Forums**: In Developer Central, click **Forums** to share information with the PayPal developer community.
- **Online Developer Support Portal** at https://paypal.com/mts.

Use the **Forums** first to find answers about any questions or problems you might have. Another developer might have already posted information about your question or problem.

To contact Developer Technical Support about the PayPal Web Services API:

1. Log in to https://developer.paypal.com/ by entering your email address and password in the Member Log In box.
2. Click **Help Center** at the bottom of the box on the right side of the page.

3. Click **Email PayPal Support**.
4. Complete the form.

Revision History

Revision history for *PayPal Sandbox User Guide*.

Date	Description
April 2012	Removed obsolete chapter, “Linking Your Sandbox with Your X.com Account.” Updated references to Website Payments Standard and Website Payments Pro to PayPal Payments Standard and PayPal Payments Pro, respectively.
December 2011	Added corrections concerning API testing and negative testing.
October 2010	Added a chapter about linking Sandbox accounts of x.com accounts.
July 2010	Added additional information about the use of the email address field when creating preconfigured accounts.
October 2009	Added information about creating preconfigured accounts, which now works for more countries. Removed chapter about “Testing Recurring Payments” because it is no longer relevant.
September 2008	Added information about testing payment review and updated screens related to payment review.
April 2008	Added information about the Instant Payment Notification simulator, described changes to the Sandbox user interface, and corrected all known problems.
December 2007	Added information about the account reset feature, changed screens to reflect changes in the user interface, and corrected all known problems.
September 2007	Changed screens to reflect new user interface, added information about testing recurring payments, and corrected all known problems.
August 2007	Changed PayPal logo and corrected all known problems.
May 2007	Revised manual to reflect new “autocreated” accounts feature.
April 2007	Added chapters on negative testing and testing APIs using the Express Checkout NVP API. Added new section on handling pending transactions and made miscellaneous changes.
July 2006	Correction of variable name ‘ipn_test,” which should be “test_ipn”.
June 2006	Correction of Sort Code necessary to test UK accounts in Sandbox. Proper Sort Code is 609204.
December 2005	Miscellaneous corrections.