Sandbox User Guide

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

Last updated: July 2010

PayPal Sandbox User Guide

Document Number: July 2010

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Preface 5

This Document 5
Intended Audience 5
Organization of This Document 5
Notational Conventions 6
Revision History 7

Chapter 1 Overview to the PayPal Sandbox 9

Get Started Quickly: Integration Center 9
At a Glance: Differences between the Sandbox and Live PayPal 9

Chapter 2 Accessing the PayPal Sandbox 13

Signing Up for Sandbox Access 13
Welcome to the PayPal Sandbox 15
Test Email 16

Chapter 3 Setting Up Test Accounts 17

Planning the Types of Test Accounts You Need 17
Managing Test Accounts 18
- Creating a Preconfigured Account 18
- Verified Account Status 22
- Resetting a Preconfigured Account 22
- Creating a Test Account Manually 26

Creating a Website Payments Pro Account 27
Adding a Funding Source 28
- Changing or Adding Additional Bank Accounts 28
- Adding Credit Cards 29
- Generating a Credit Card Number to Test PayPal Account Optional 30

Chapter 4 Testing PayPal Website Features 31

Website Payments with Buy Now Button 31
- Encrypted Website Payments 32
- Testing Payments with Buy Now Button 32
- Verifying a Test Payment 32

Handling Pending Transactions 33
- Creating a Pending Transaction 33

Ex. 1008 / Page 3 of 64
M&A Ventures, LLC et al

Completing or Canceling a Pending Transaction 33
Verifying a Test Refund 34
Transferring Funds to a Test Account 35
Clearing or Failing Test eCheck Transactions 35
Sending Funds to a Seller 36
Billing A Customer 36

Chapter 5 Testing PayPal NVP APIs 39

Testing Express Checkout 39

Chapter 6 Sandbox Test Tools 43

Instant Payment Notification Simulator 43
Testing IPN Messages in the Sandbox 45

Chapter 7 Testing Error Conditions 47

API Testing 48
Negative Testing Using an Amount-Related Trigger Field 50
Negative Testing Using a Non-Amount Trigger Field 50
Negative Testing With Multiple Messages 51
Testing Using AVS Codes 52
Testing an AVS Code Using Virtual Terminal 53
Testing an AVS Code Using DoDirectPayment 54
Testing Using CVV Codes 56
Testing a CVV Code Using Virtual Terminal 56
Testing a CVV Code Using DoDirectPayment 57

Chapter 8 Testing Payment Review 59

Chapter 9 Technical Support 61

Contacting Customer Service for Live PayPal Website Help 61
Contacting Developer Technical Support for API Help 61

Index 63

Ex. 1008 / Page 4 of 64
M&A Ventures, LLC et al

Preface

This Document

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.

Organization of This Document

Chapter 1, "Overview to the PayPal Sandbox," describes the Sandbox in general and lists the differences between the Sandbox and the production PayPal services.

Chapter 2, "Accessing the PayPal Sandbox," describes how to gain access to the Sandbox.

Chapter 3, "Setting Up Test Accounts," describes the different kinds of business roles and corresponding test accounts you need to set up on the Sandbox for effective testing of your PayPal-based applications.

Chapter 4, "Testing PayPal Website Features," describes how you can use the Sandbox (https://www.sandbox.paypal.com) to test features that correspond to the features on the main PayPal interactive site https://www.paypal.com/.

Chapter 5, "Testing PayPal NVP APIs," describes how to test the Express Checkout NVP API in the Sandbox.

Chapter 6, "Sandbox Test Tools," describes how to use Sandbox test tools, such as the Instant Payment Notification simulator.

Chapter 7, "Testing Error Conditions," describes how to use the negative testing feature to simulate error conditions.

Chapter 8, "Testing Payment Review," provides information about a feature for testing recurring payments.

Chapter 9, "Technical Support," provides information on contacting Technical Support.

Ex. 1008 / Page 5 of 64
M&A Ventures, LLC et al

Notational Conventions

This document uses typefaces to identify the characteristics of text. These typefaces and the characteristics they imply are described below:

Typeface	How Used
serif italics	A document title.
	A term being discussed or defined. For example: A file is a readable or writable stream of characters …
	Boolean values (not keywords). For example: The function returns true if it encounters an error.
`monospaced`	Pathnames or file names that appear in body text frames.
	Code-related names that appear in body text frames. Such names are used for functions, callbacks, arguments, data structures, and fields. For example: `AbstractResponseType` is the SOAP response type definition on which all PayPal API response methods are based.
	Components of Internet protocol requests and responses, such as HTTPS and `FORM` variables. For example: The PayPal system uses a `method=POST` request to return IPN status variables related to subscriptions, such as `txn_type`.
Serif bold	User interface names, such as window names or menu selections. For example: On the **Profile** page, click Email to confirm your email address.
San-serif oblique	Placeholders used in the context of a format or programming standard or formal descriptions of PayPal system syntax. Placeholders indicate values or names that the reader should provide. Example: For example, amount is the variable for a single-item shopping cart, but amount_X is the name of the variable for a multi-item shopping cart. *amount_3* is the item amount for the third item in a multiple-item shopping cart.

To convey additional information, this document may also apply color and underlining to words or phrases that use the typefaces described above. Such use is described below:

Text attribute	How Used
xxxxxx	Hypertext link to a page in the current document or to another document in the set.
xxxxxx	Hypertext link to a URL or that initiates a web action, such as sending mail.

Revision History

Revision history for *PayPal Sandbox User Guide*.

TABLE P.1 Revision History

Date	Description
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.

Ex. 1008 / Page 7 of 64
M&A Ventures, LLC et al

Ex. 1008 / Page 8 of 64
M&A Ventures, LLC et al

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 to ensure that it functions as you intend and within the guidelines and standards set forth by the PayPal Developer Network (PDN).

Get Started Quickly: Integration Center

PayPal's Integration Center at https://www.paypal.com/integration has step-by-step details for getting started with the PayPal Software Development Kits (SDKs), Website Payments Pro, Express Checkout, Website Payments Standard, Authorization & Capture, Instant Payment Notification, and more.

Visit the Integration Center at: https://www.paypal.com/integration

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.

TABLE 1.1 Differences between PayPal Sandbox, and Live PayPal

	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

Ex. 1008 / Page 9 of 64
M&A Ventures, LLC et al

TABLE 1.1 Differences between PayPal Sandbox, and Live PayPal

	PayPal Sandbox	Live PayPal Website and API Service

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.
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.

Ex. 1008 / Page 10 of 64
M&A Ventures, LLC et al

TABLE 1.1 Differences between PayPal Sandbox, and Live PayPal

	PayPal Sandbox	Live PayPal Website and API Service
PayPal Merchant Features supported	All features of the live PayPal website, except closing an account, auction features, monthly statements, shipping preferences, and PayPal Shops.	

Ex. 1008 / Page 11 of 64
M&A Ventures, LLC et al

Ex. 1008 / Page 12 of 64
M&A Ventures, LLC et al

2 Accessing the PayPal Sandbox

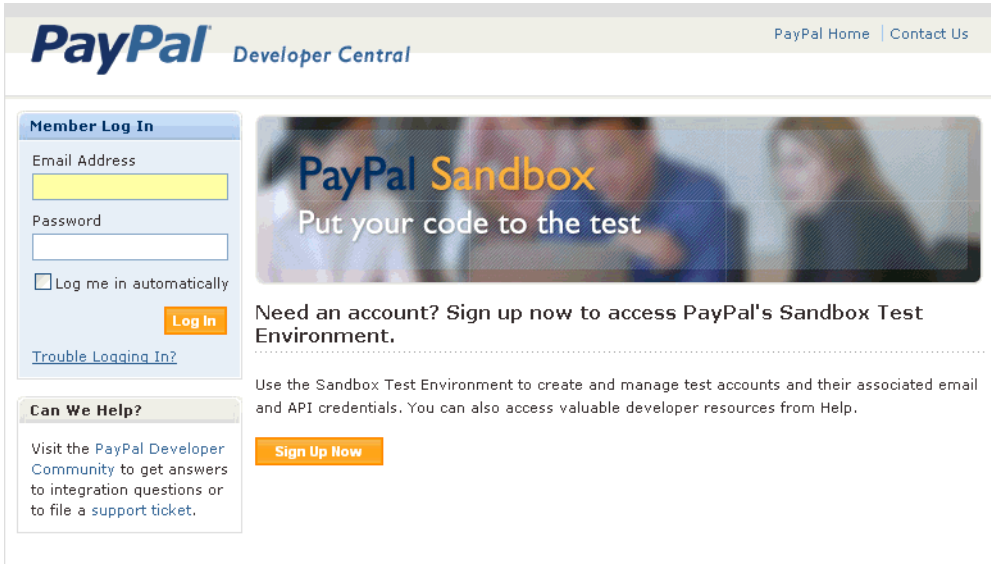
To access the PayPal Sandbox, sign up for an account at https://developer.paypal.com. After signing up, you access the Sandbox either programatically or by logging in.

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 17.

Signing Up for Sandbox Access

To sign up for Sandbox access:

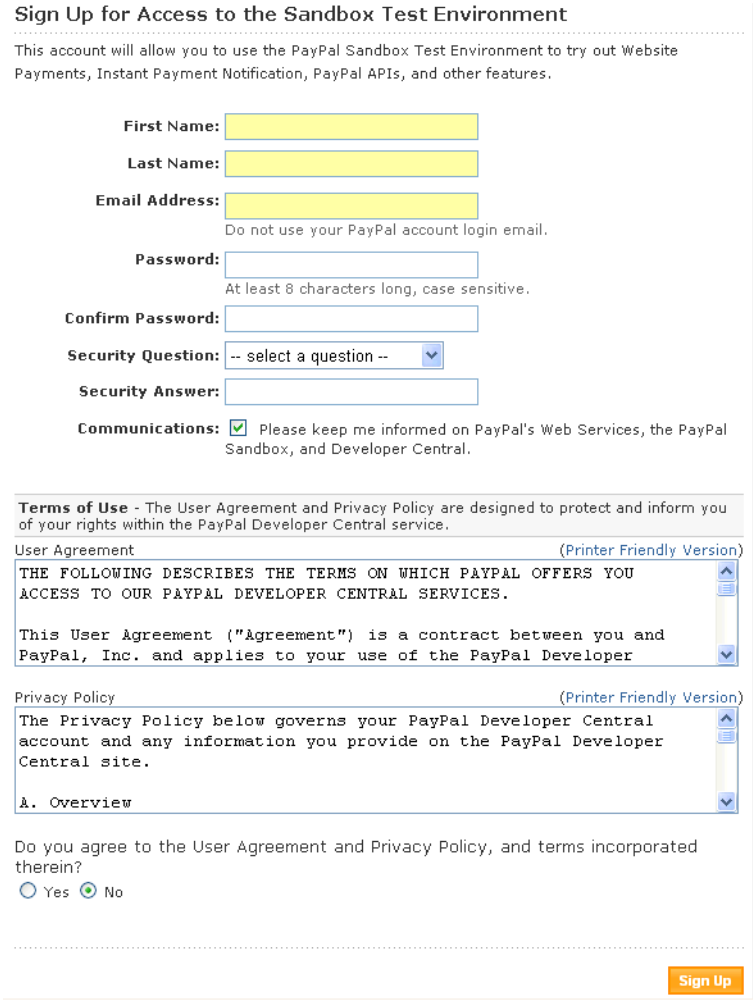
1. Go to https://developer.paypal.com. The log in screen is shown below:



2. If you already have an account, enter your Log In Email and Password and click **Log In**.

Ex. 1008 / Page 13 of 64
M&A Ventures, LLC et al

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.

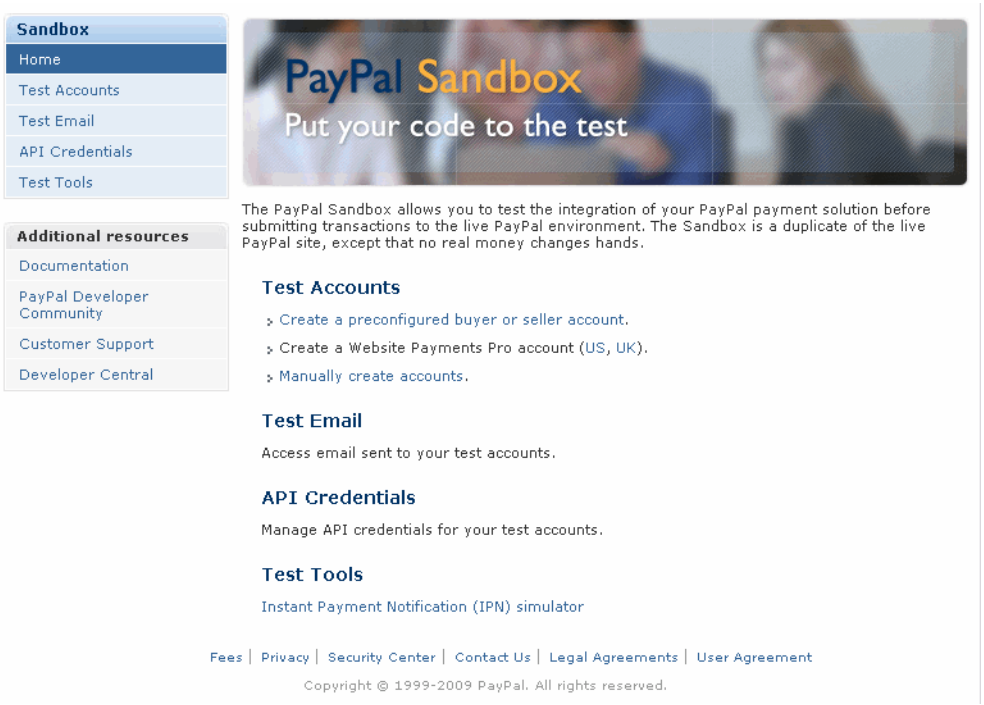
After you sign up, PayPal sends login instructions to the email address you used to sign-up. If you have mail filtering enabled in your mail software, the email sent by PayPal might be filtered out or stored in a folder where you are not expecting it to be. For instance, with Microsoft Outlook mail software,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

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

Ex. 1008 / Page 14 of 64
M&A Ventures, LLC et al

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 17.
- Access email sent to test accounts from the **Test Email** tab. For more information, see "Test Email" on page 16.
- 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 43.
- Change the log in password using the **Profile** link.

  NOTE: You cannot change the Log In Email address.

Ex. 1008 / Page 15 of 64
M&A Ventures, LLC et al

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.

Ex. 1008 / Page 16 of 64
M&A Ventures, LLC et al

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 Website Payments Pro

Ex. 1008 / Page 17 of 64
M&A Ventures, LLC et al

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.

Ex. 1008 / Page 18 of 64
M&A Ventures, LLC et al

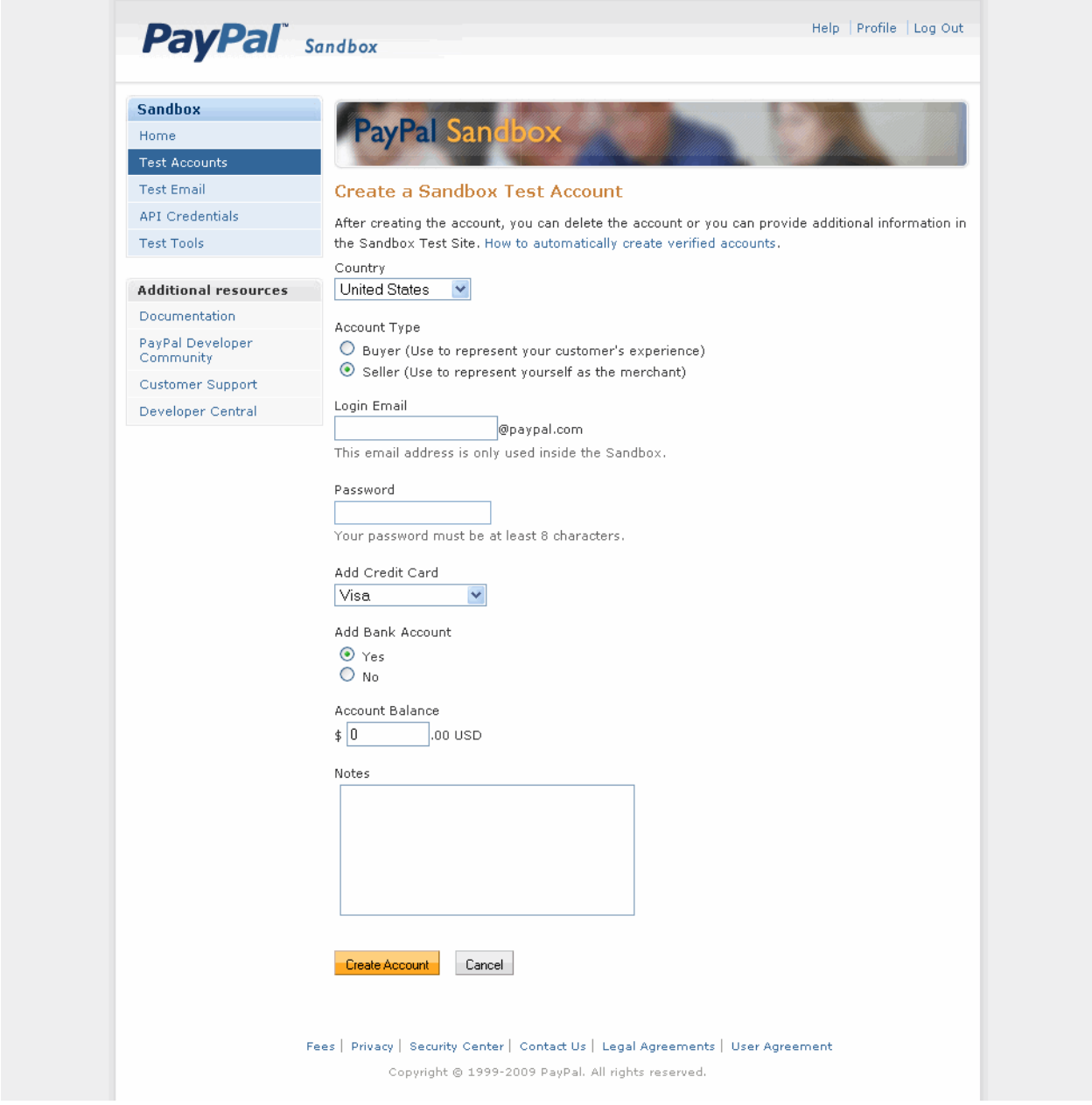
2. Choose the country for which you want the account to be registered.

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

Ex. 1008 / Page 19 of 64
M&A Ventures, LLC et al

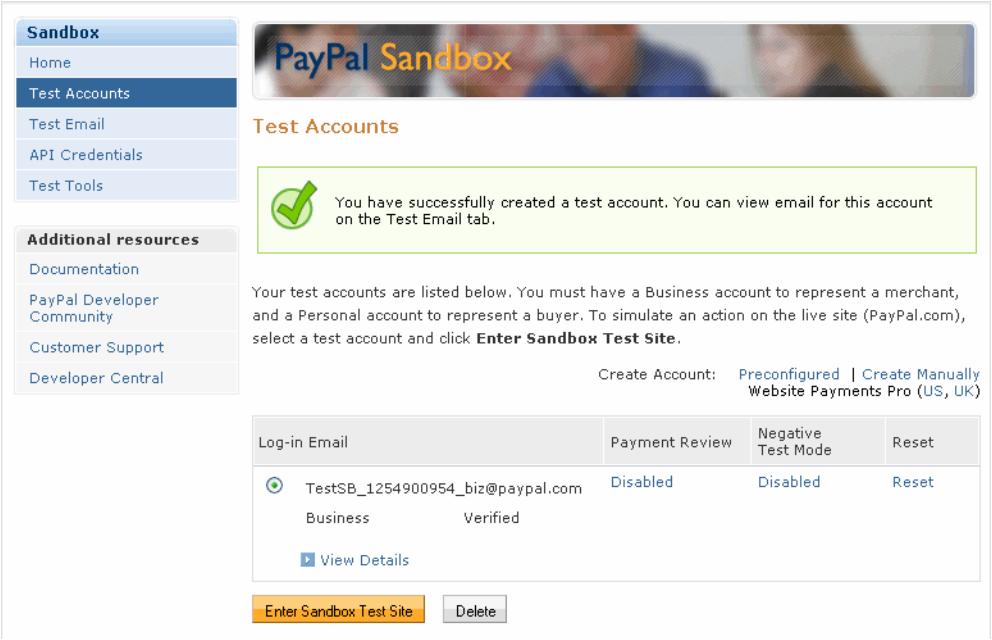
field, the email address, which is only used in the Sandbox, would be something like `test01_1279824359_per@adomain.com`.



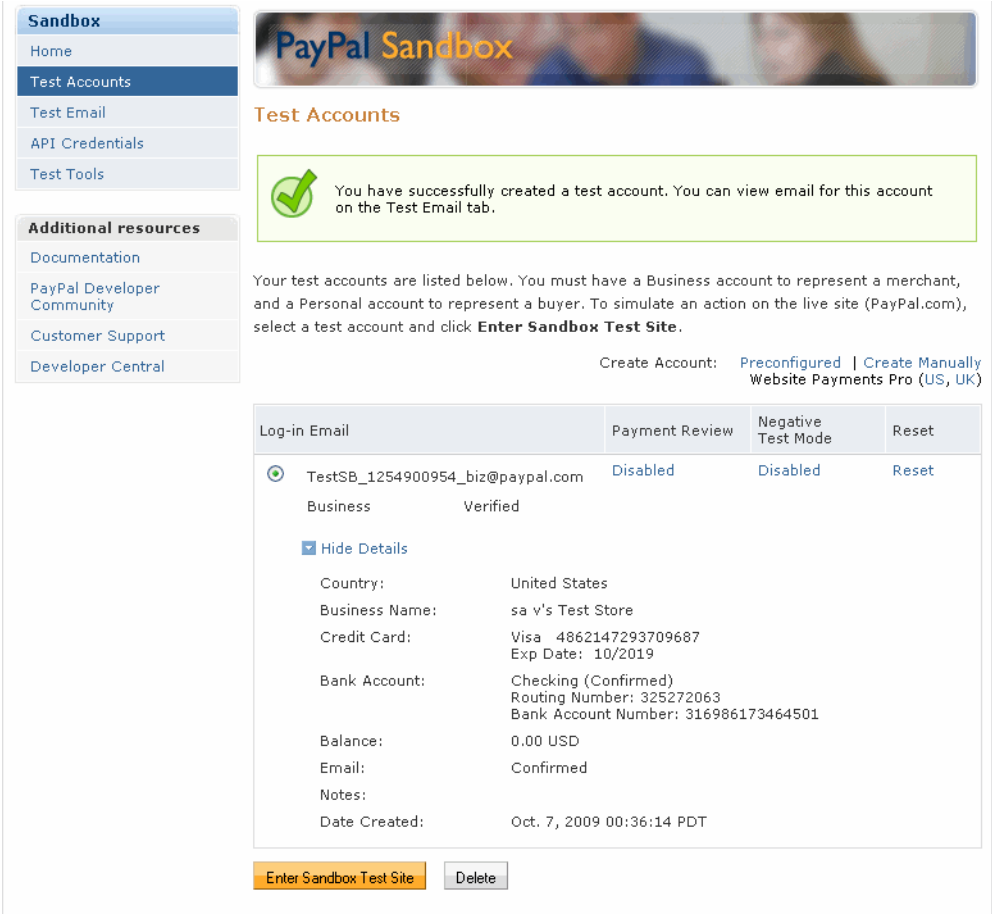
4. Click **Create Account**.

Ex. 1008 / Page 20 of 64
M&A Ventures, LLC et al

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

Ex. 1008 / Page 22 of 64
M&A Ventures, LLC et al

account or credit card numbers. Consider the following account information associated with a test account:

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

Hide Details

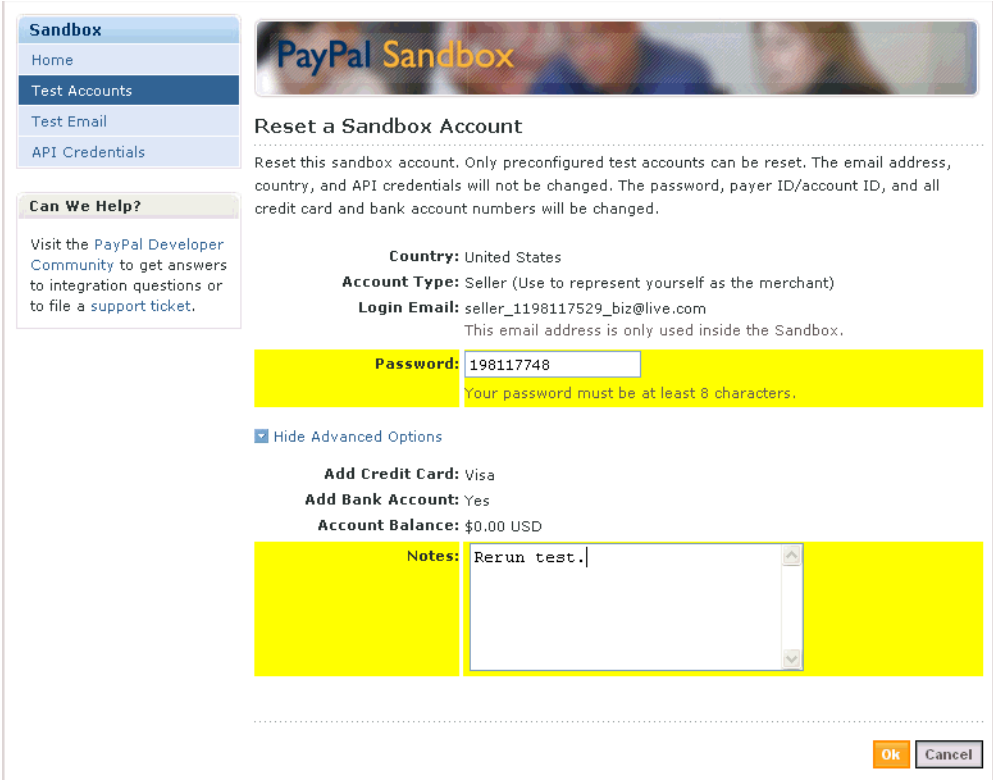
Business Name:	Gary McCue's Test Store
Credit Card:	Visa 4997638765391457 Exp Date: 12/2017
Bank Account:	Checking (Confirmed) Routing Number: 325272199 Bank Account Number: 316253011064226
Balance:	0.00 USD
Email:	Confirmed
Notes:	
Date Created:	Dec. 19, 2007 18:25:40 PST

Sandbox Test Accounts With API Signatures

Test Account		Date Created
Test Account:	**seller_1198117529_biz@live.com**	Dec. 19, 2007 18:25:41 PST
API Username:	seller_1198117529_biz_api1.live.com	
API Password:	1198117541	
Signature:	AWYujIOmqYJ9hjSc4XD9v4tF7TtGAmKf5L2cHk63Scn5lXlGiKoCVWx.	

Ex. 1008 / Page 23 of 64
M&A Ventures, LLC et al

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:



Ex. 1008 / Page 24 of 64
M&A Ventures, LLC et al

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

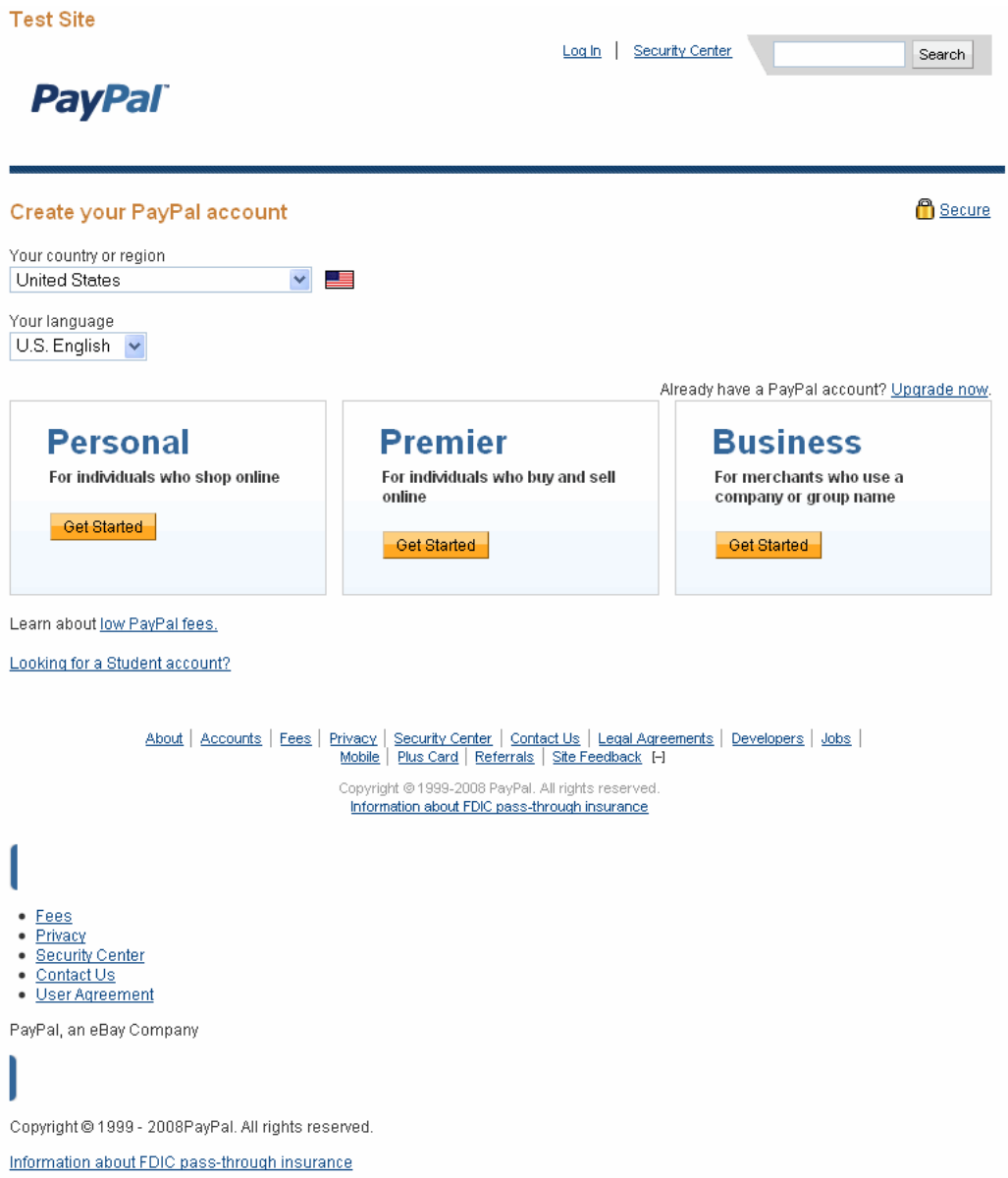
Business Name:	Gary McCue's Test Store
Credit Card:	Visa 4641631486853053 Exp Date: 12/2017
Bank Account:	Checking (Confirmed) Routing Number: 325272034 Bank Account Number: 848726650957846
Balance:	0.00 USD
Email:	Confirmed
Notes:	Rerun test.
Date Reset:	Dec. 19, 2007 18:30:53 PST

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.	

Ex. 1008 / Page 25 of 64
M&A Ventures, LLC et al

Creating a Test Account Manually

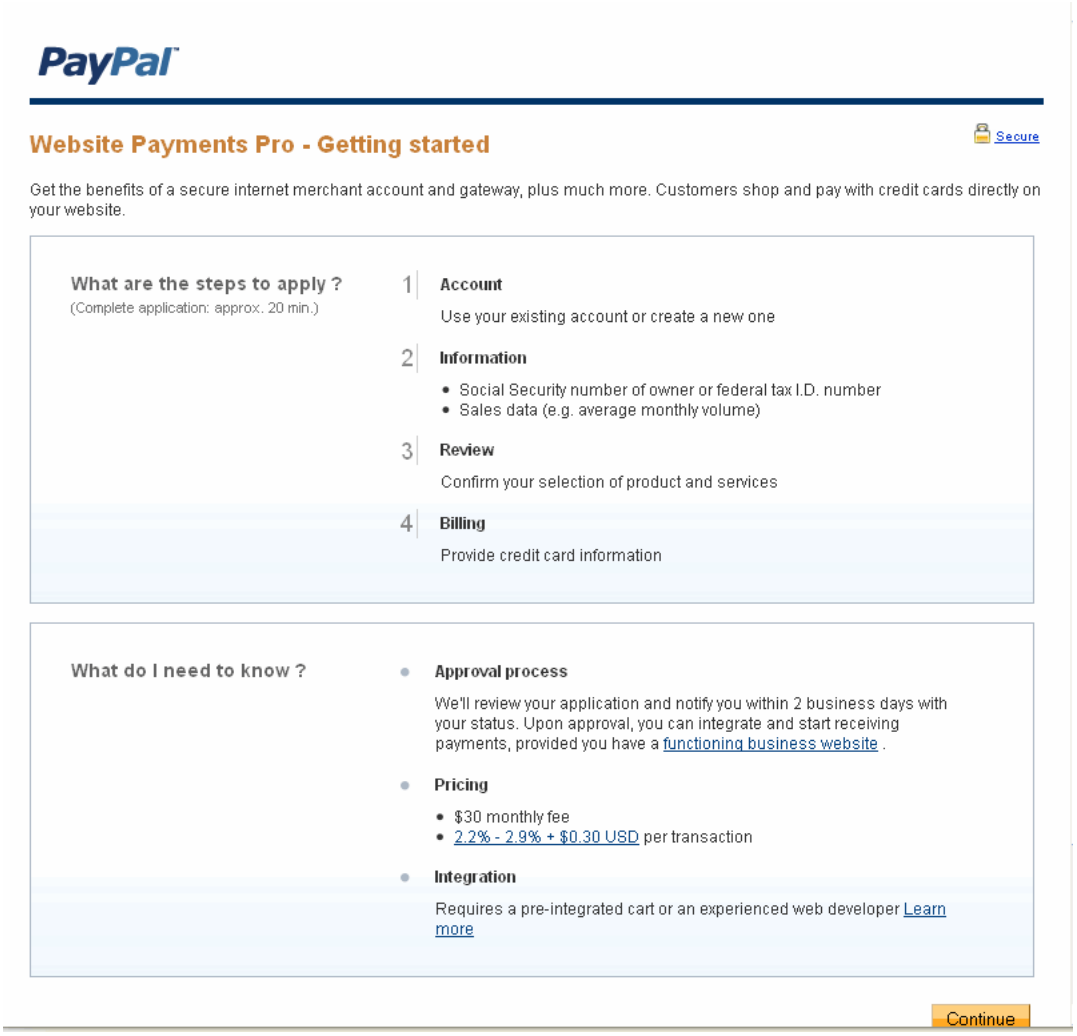
You can create a test account manually by clicking the **Create Manually** link for Create Account. This action automatically places you in the Sandbox Test Site, where you create the test account just as you would on the live site:



Ex. 1008 / Page 26 of 64
M&A Ventures, LLC et al

Creating a Website Payments Pro Account

You can use a wizard to create a Website Payments Pro business account by clicking the **Website 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 Website Payments Pro account on the live site using a wizard to take you through the steps:



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

`111`*xxxxxx*

where *x* is any digit.

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

Ex. 1008 / Page 27 of 64
M&A Ventures, LLC et al

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 28. 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 29. 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.

TABLE 3.1 Australian German, Canadian, and UK Test Bank Account Information

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	

Ex. 1008 / Page 28 of 64
M&A Ventures, LLC et al

Steps for All Countries

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, leave the automatically generated information as is.
6. Make a note of the credit card number for your use in later testing.
7. Click **Add Credit Card**.

Ex. 1008 / Page 29 of 64
M&A Ventures, LLC et al

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.

Ex. 1008 / Page 30 of 64
M&A Ventures, LLC et al

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 *Website 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:

Ex. 1008 / Page 31 of 64
M&A Ventures, LLC et al

```
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 *Website Payments Standard Integration Guide*

For information about using the PayPal SDK console to generate EWP HTML, see the *PayPal SDK Guide* for any of the supported platforms.

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**.

Ex. 1008 / Page 32 of 64
M&A Ventures, LLC et al

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.

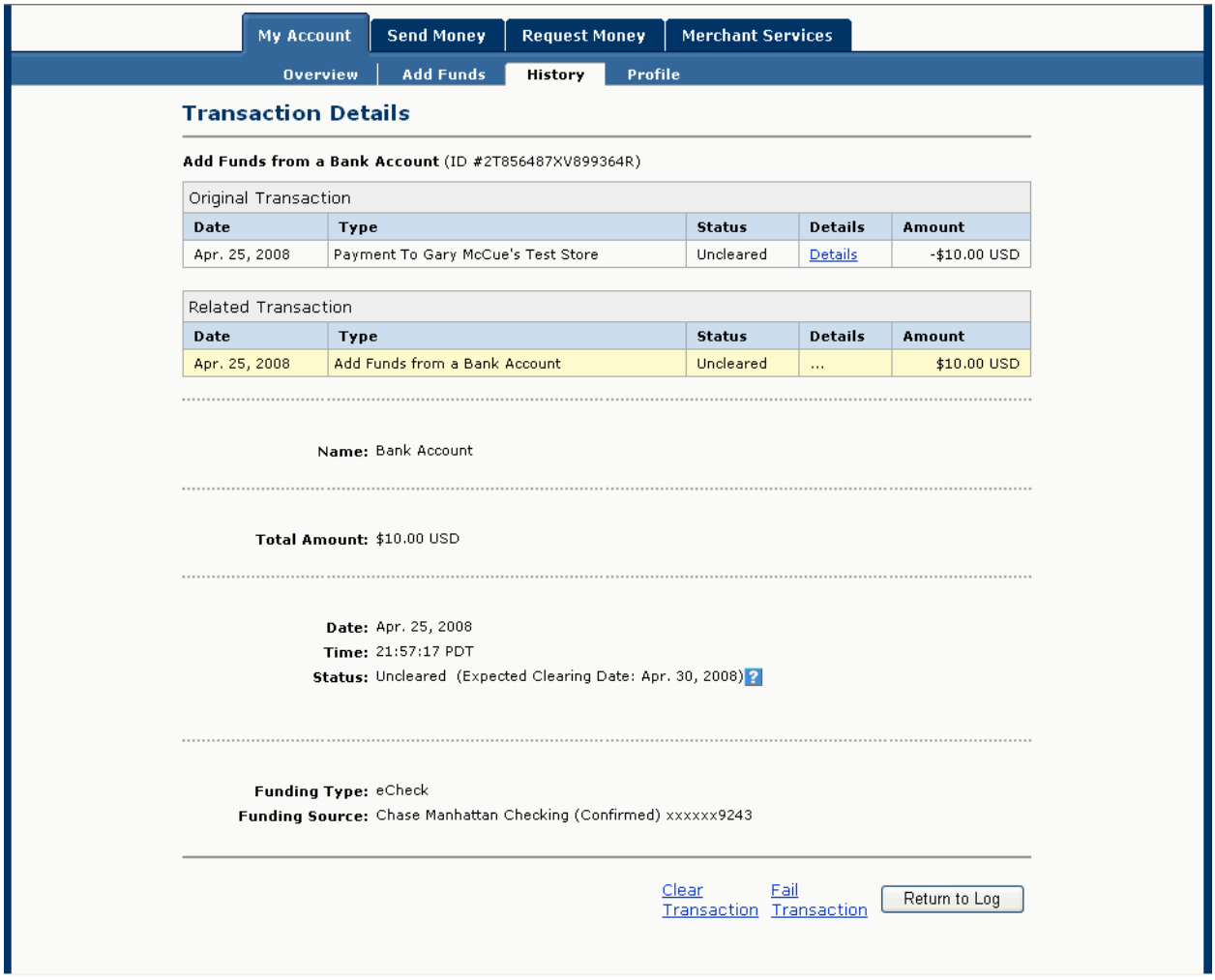
To verify the creation of the transaction, see "Verifying a Test Payment" on page 32.

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.

Ex. 1008 / Page 33 of 64
M&A Ventures, LLC et al

– **Fail Transaction:** Click to cancel the transaction.



Verifying a Test Refund

To verify a test refund, you must have already made a test payment.

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.

Ex. 1008 / Page 34 of 64
M&A Ventures, LLC et al

– 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 33.

Ex. 1008 / Page 35 of 64
M&A Ventures, LLC et al

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 16.

    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:

Ex. 1008 / Page 36 of 64
M&A Ventures, LLC et al

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 16.

Ex. 1008 / Page 37 of 64
M&A Ventures, LLC et al

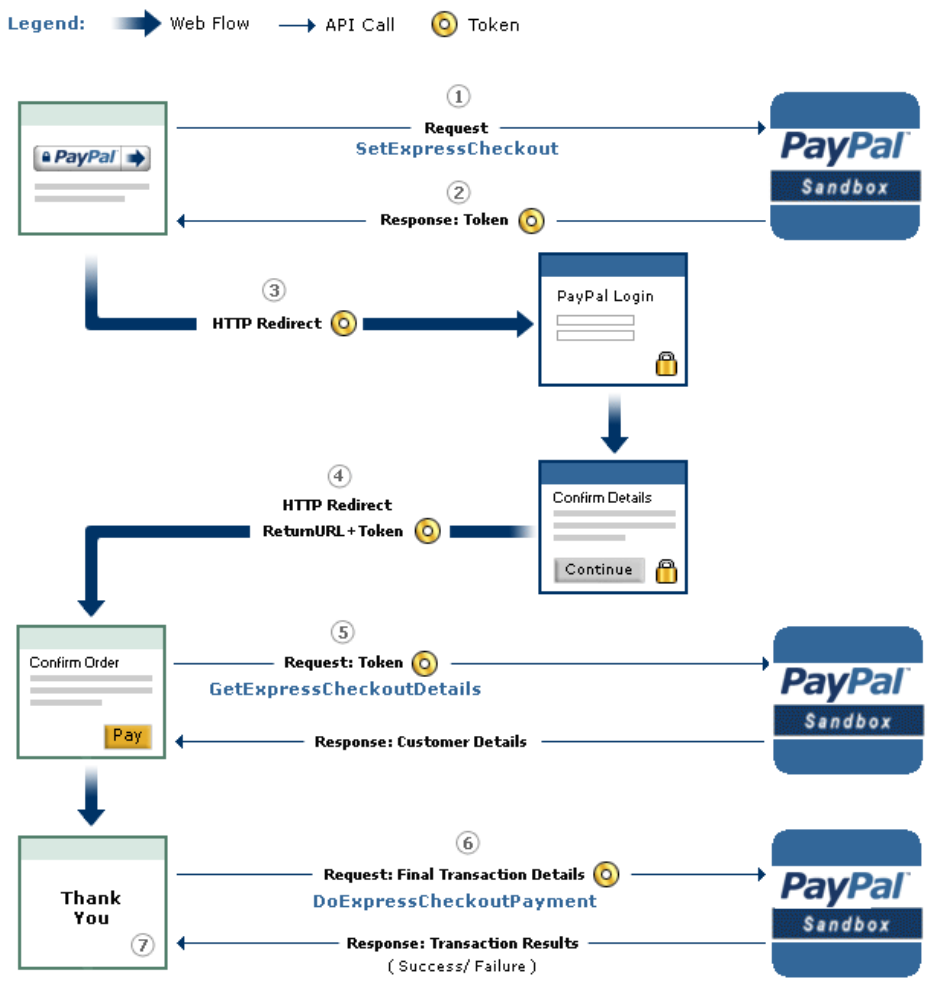
Ex. 1008 / Page 38 of 64
M&A Ventures, LLC et al

5 Testing PayPal NVP APIs

This chapter describes how to test the Express Checkout name-value pair (NVP) API in the Sandbox. For more sophisticated examples, PayPal recommends you use the PayPal SDK that matches your environment, such as PHP or ASP. You can also use this chapter for ideas on how to establish a general testing procedure for PayPal APIs called from your site.

Testing Express Checkout

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



Ex. 1008 / Page 39 of 64
M&A Ventures, LLC et al

NOTE: For information about Express Checkout, see the *Express Checkout Integration Guide* and the *PayPal NVP API Developer Guide and Reference*.

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 `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 API Credentials tab of the Sandbox to obtain a signature.

2. 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, as follows:

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

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

4. Log into the Sandbox and confirm details. You must log in to https://developer.paypal.com and select the test account that represents the buyer, not the *API_username* business test account that represents you as the merchant. Then click **Enter Sandbox Test Site**.

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

Ex. 1008 / Page 40 of 64
M&A Ventures, LLC et al

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

5. Invoke a form on your site that calls the `GetExpressCheckout` API 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 `GetExpressCheckout` 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 calls the `DoExpressCheckoutPayment` API 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>
```


Ex. 1008 / Page 41 of 64
M&A Ventures, LLC et al

```
</form>
```

7. 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
```

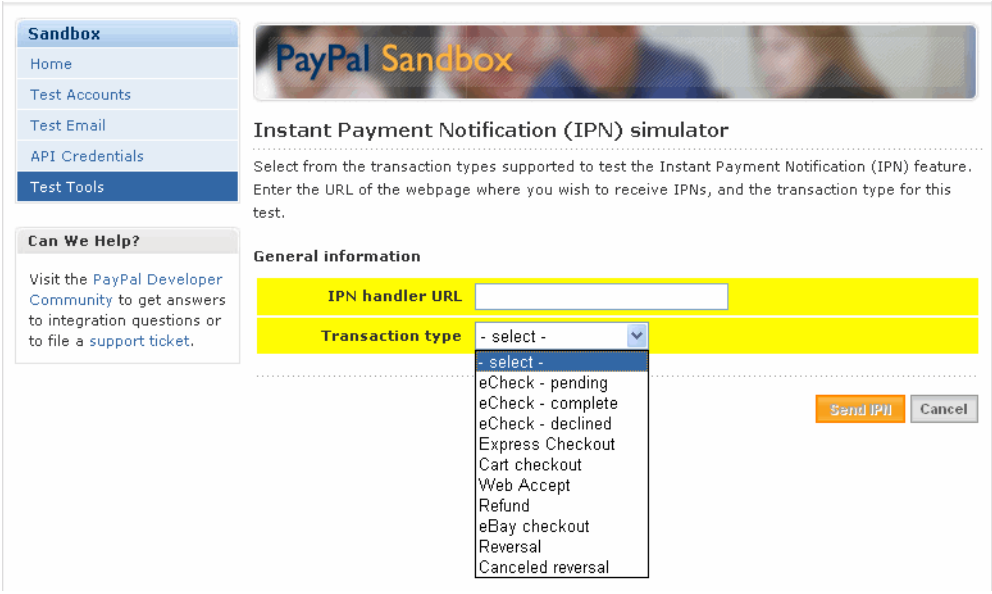

Ex. 1008 / Page 42 of 64
M&A Ventures, LLC et al

6 Sandbox Test Tools

Instant Payment Notification Simulator

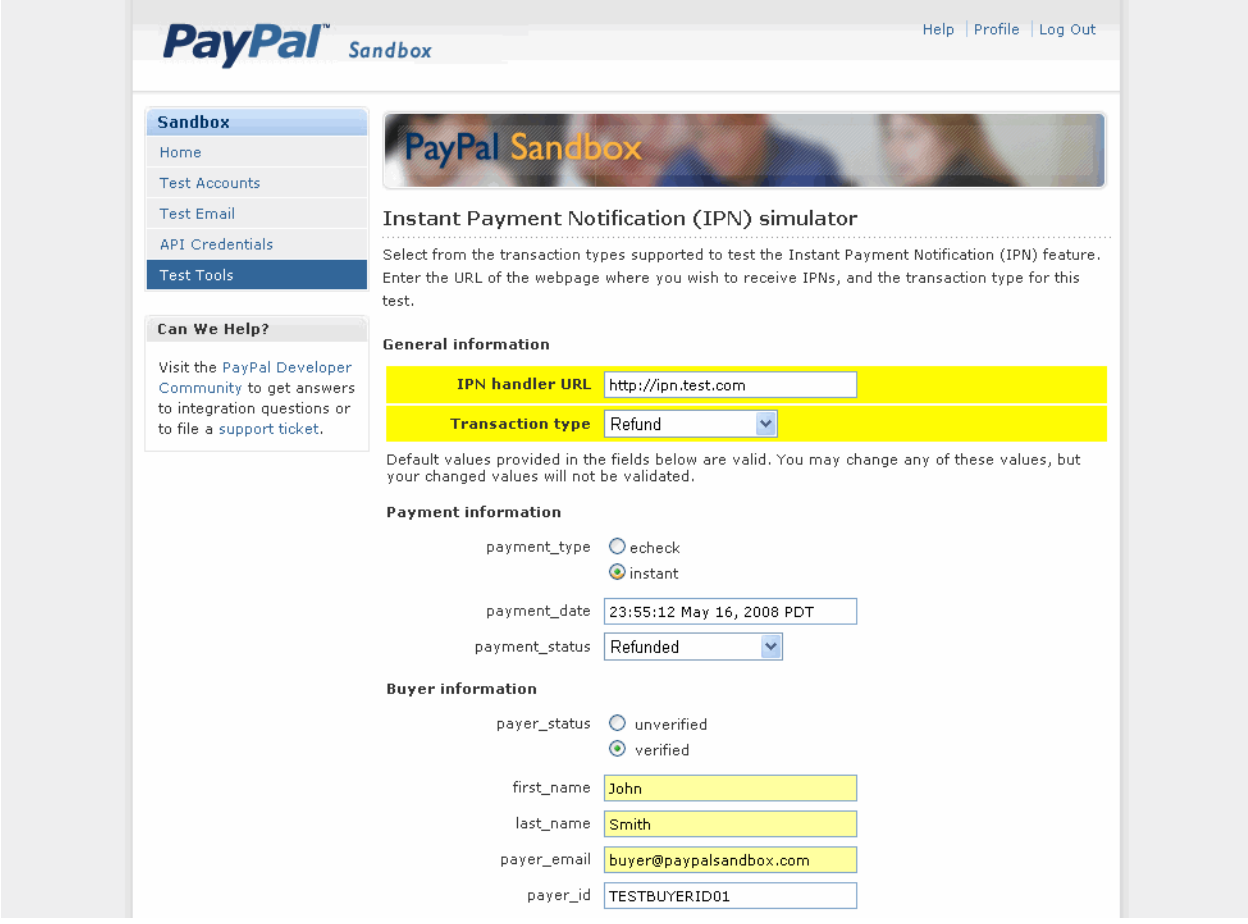
You can use the Instant Payment Notification (IPN) Simulator to send IPNs to the URL that you set up to receive them. You can use this tool to verify that you are receiving IPNs correctly.

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:

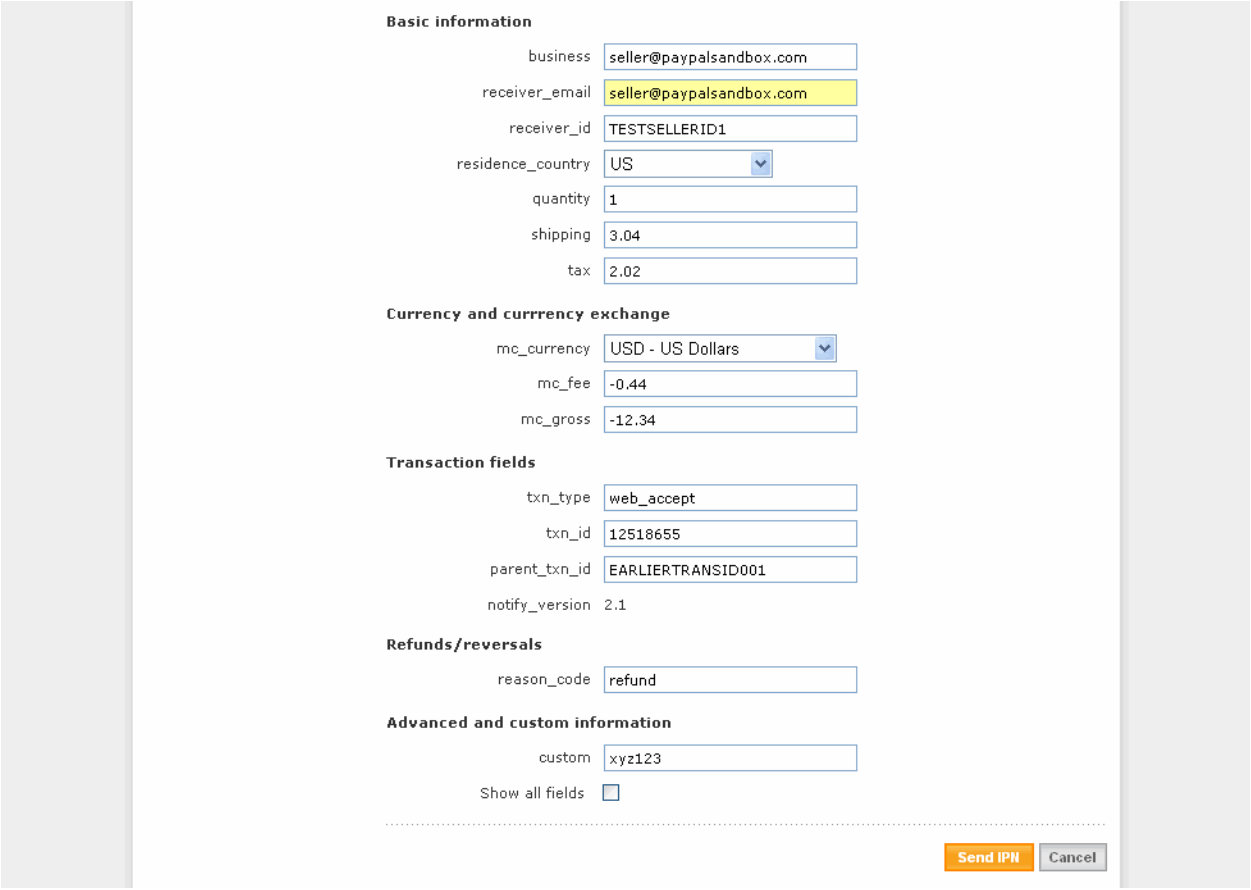


Ex. 1008 / Page 43 of 64
M&A Ventures, LLC et al

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



Ex. 1008 / Page 44 of 64
M&A Ventures, LLC et al



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.

Ex. 1008 / Page 45 of 64
M&A Ventures, LLC et al

Ex. 1008 / Page 46 of 64
M&A Ventures, LLC et al

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.

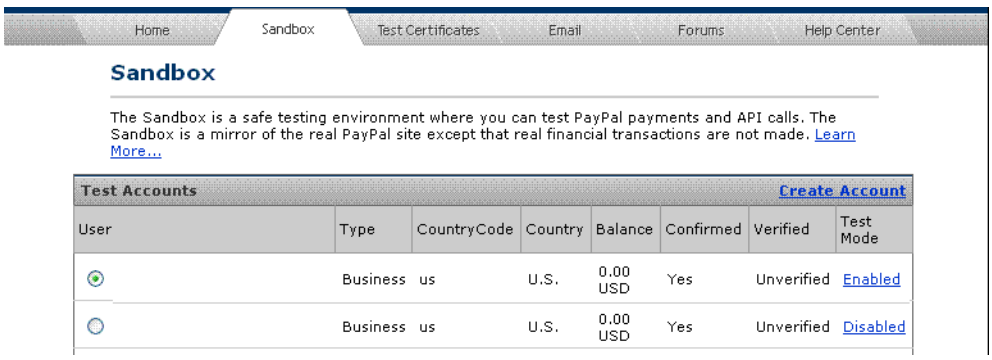
The Sandbox can be set to allow *negative testing*, which enables you to simulate an error. You can test against the following kinds of errors:

- 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

Ex. 1008 / Page 47 of 64
M&A Ventures, LLC et al

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:

TABLE 7.1 API Fields That Trigger Error Conditions

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.

Ex. 1008 / Page 48 of 64
M&A Ventures, LLC et al

TABLE 7.1 API Fields That Trigger Error Conditions *(Continued)*

API Name	NVP Field Name	SOAP Element	Description
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.
DoExpressCheckout	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.
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.

Ex. 1008 / Page 49 of 64
M&A Ventures, LLC et al

***TABLE 7.1 API Fields That Trigger Error Conditions** (Continued)*

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.
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
```

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:

Ex. 1008 / Page 50 of 64
M&A Ventures, LLC et al

```
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:

Ex. 1008 / Page 51 of 64
M&A Ventures, LLC et al

```
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:

TABLE 7.2 AVS Error Conditions and Triggers

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.

Ex. 1008 / Page 52 of 64
M&A Ventures, LLC et al

TABLE 7.2 AVS Error Conditions and Triggers *(Continued)*

AVS Code	Trigger	Description of Error
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.
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.

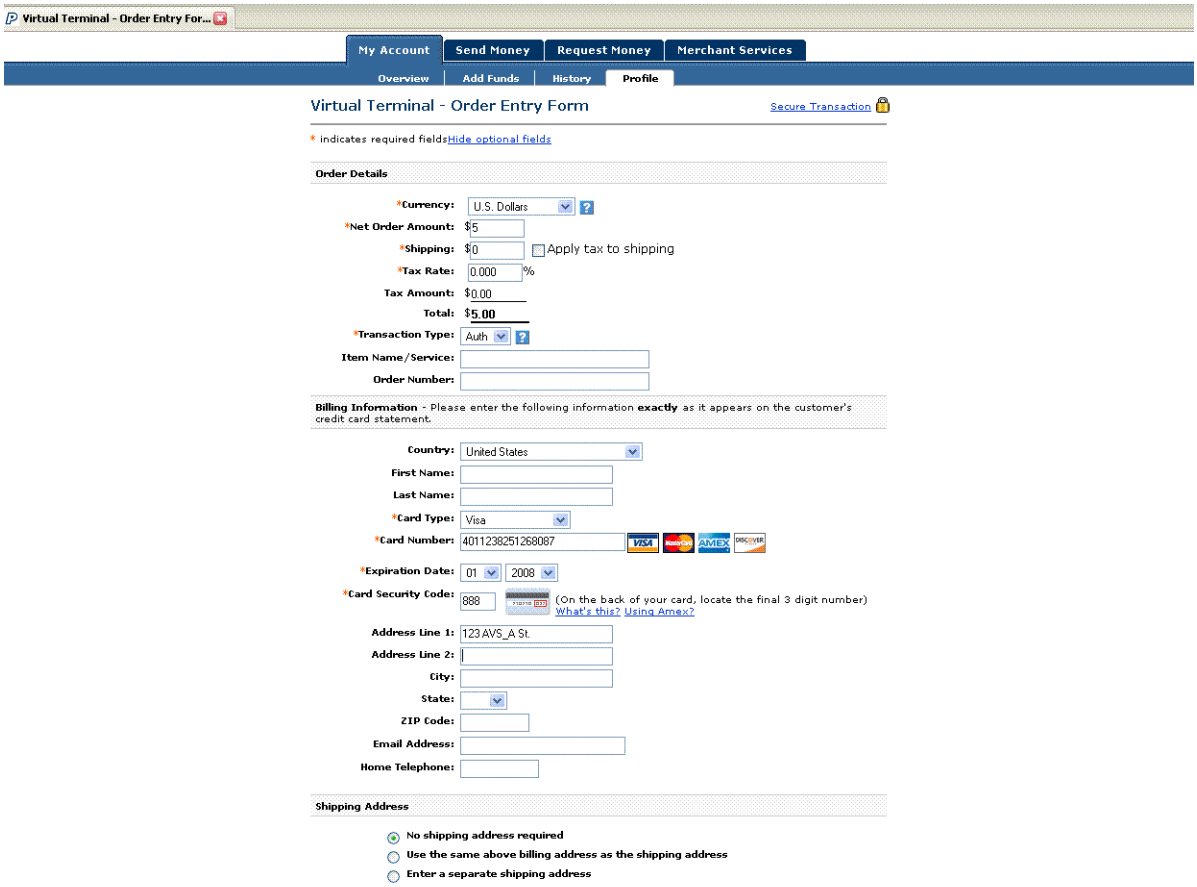
NOTE: The specified AVS code is set, regardless of whether a PP API error code is set. If no AVS code is specified or the AVS risk control is not specified, AVS code X is returned.

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:

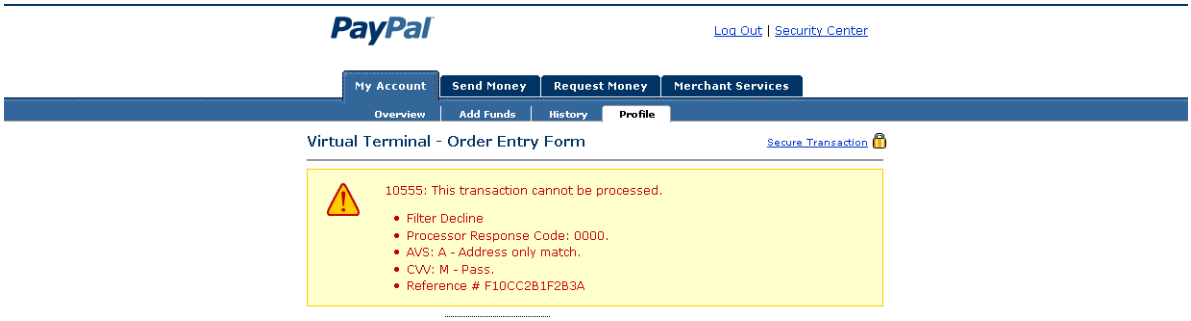
Ex. 1008 / Page 53 of 64
M&A Ventures, LLC et al

FIGURE 7.1 Entering an AVS code in the Address Line 1 field



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

FIGURE 7.2 AVS error message from Virtual Terminal



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:

Ex. 1008 / Page 54 of 64
M&A Ventures, LLC et al

```
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=usernamе&
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
```


Ex. 1008 / Page 55 of 64
M&A Ventures, LLC et al

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:

TABLE 7.3 CVV Error Conditions and Triggers

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

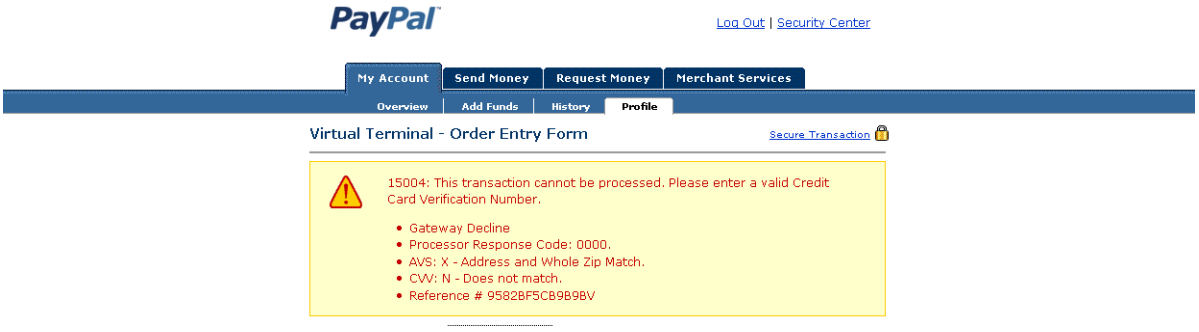
Consider an example of testing for CVV code `N` using Virtual Terminal. You enter `116` in the **Card Security Code** field:

Ex. 1008 / Page 56 of 64
M&A Ventures, LLC et al

FIGURE 7.3 Entering a CVV code in the Card Security Code field

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

FIGURE 7.4 CVV error message from Virtual Terminal



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:

Ex. 1008 / Page 57 of 64
M&A Ventures, LLC et al

```
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
```

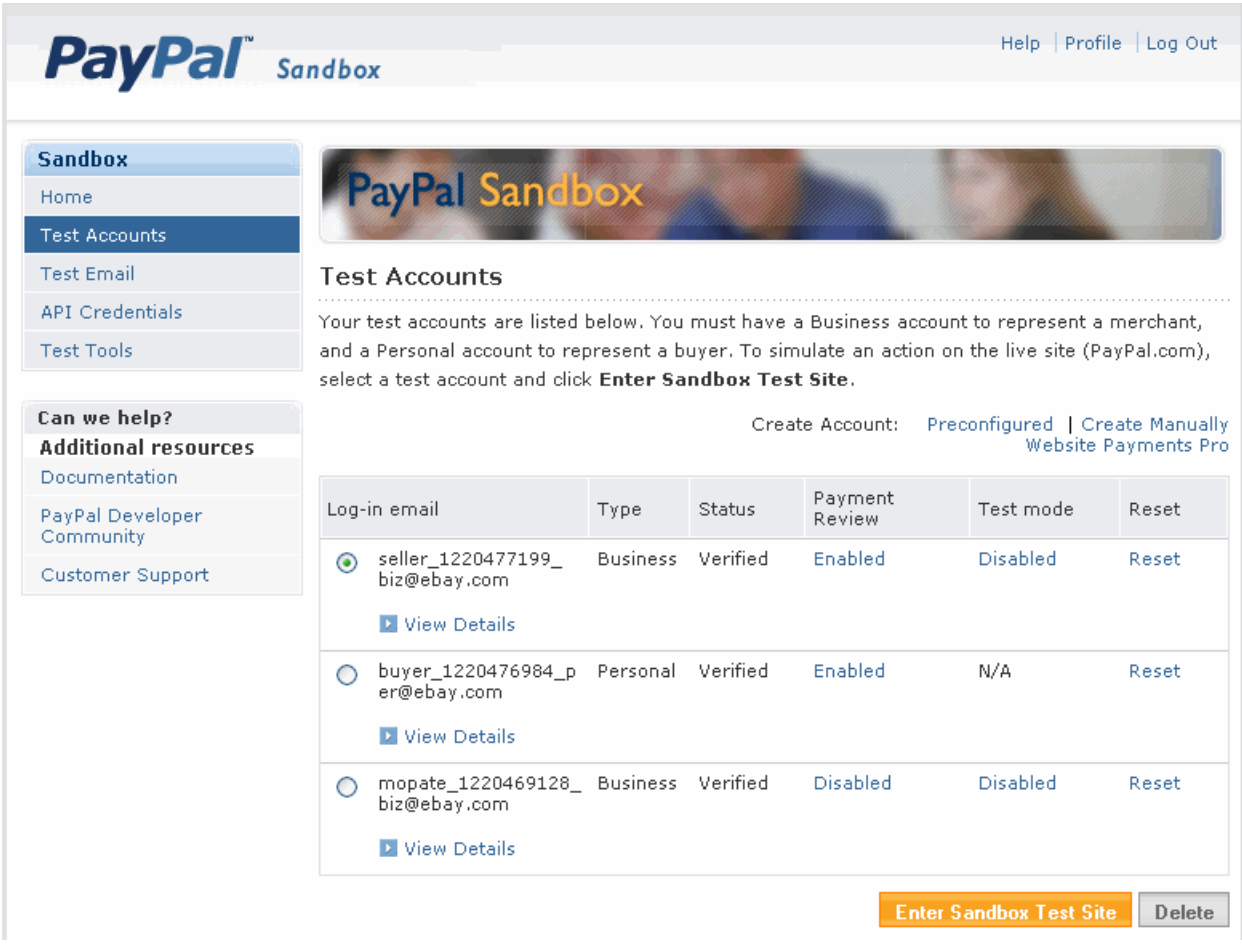
The request invokes the following response:

```
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
```


Ex. 1008 / Page 58 of 64
M&A Ventures, LLC et al

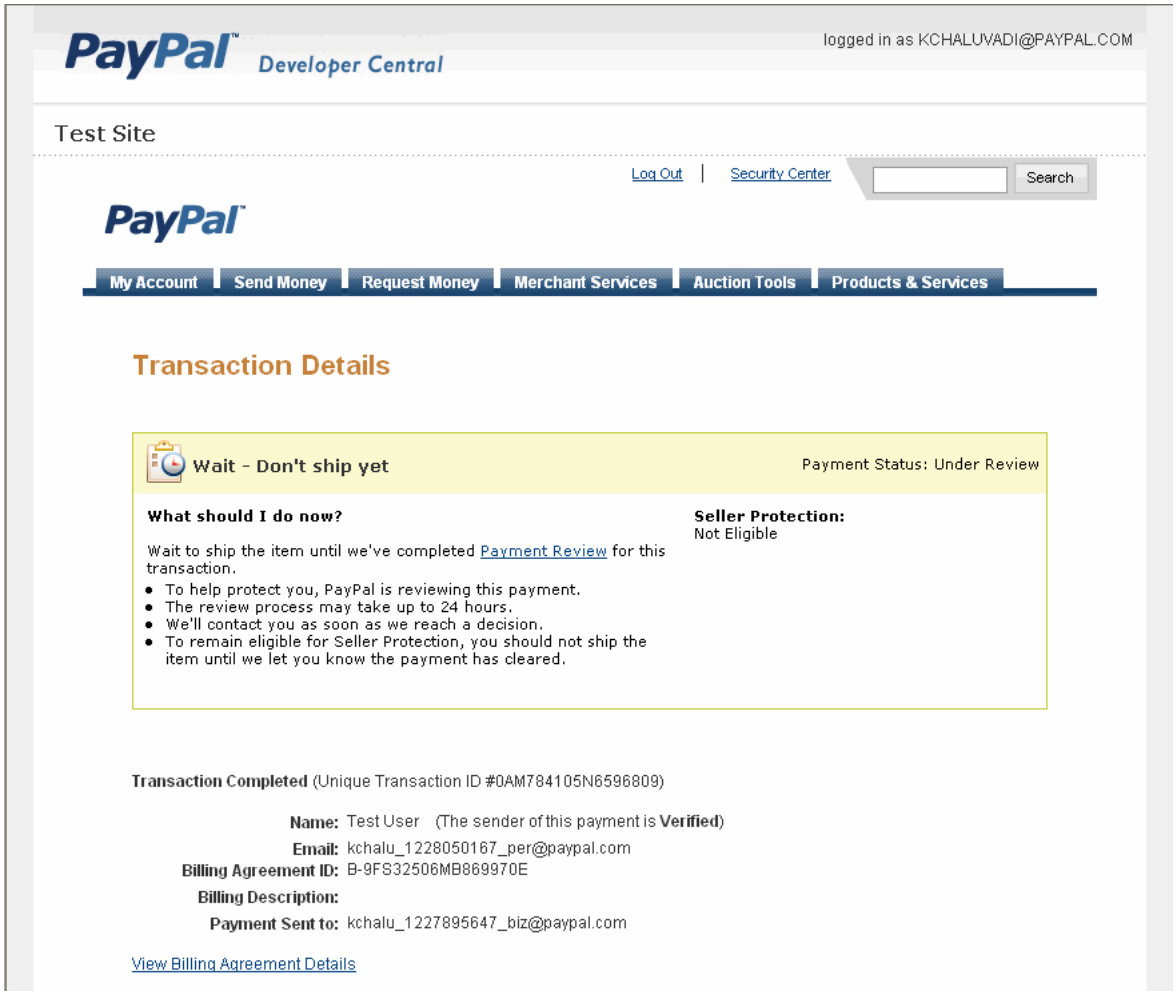
8 Testing Payment Review

On the live site, payment reveiw is always active, which means that PayPal reviews payments automatically for various risk factors. In the Sanbox, 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:



Ex. 1008 / Page 59 of 64
M&A Ventures, LLC et al

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



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://www.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 your account at 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**.

Ex. 1008 / Page 61 of 64
M&A Ventures, LLC et al

4. Complete the form.

Ex. 1008 / Page 62 of 64
M&A Ventures, LLC et al

Index

A

account status 22
adding a bank account 28
address verification testing 52
API server for Sandbox 10
API testing 48

B

bank account
  adding 28
  for Canadian test accounts 28
  for German test accounts 28
  for UK test accounts 28
Bank Account Number 28
billing a customer 36
BSB Number 28
Buy Now 31

C

Canadian bank account info 28
credit card validation testing 56

D

delete test account 18

E

eCheck 35
email in Sandbox 16
errors, testing 47

F

fraud detection in Sandbox 10

G

German bank account info 28

I

instant payment notification simulator 43
Institution Number 28
Integration Center 9

M

manually created test accounts 18, 26

N

name-value pair (NVP) APIs 39
negative testing 47

P

paying 36
payment review, testing 59
PayPal Developer Network 9
PDN 9
pending transactions 33
positive test 47
preconfigured test accounts 18

R

Request Money testing 36
reset test account 18
reset test accounts 22

S

Sandbox
  API server for 10
  email 16
SDKs 9

Ex. 1008 / Page 63 of 64
M&A Ventures, LLC et al

Send Money 36
simulator, instant payment notification 43
Social Security Number for Website Payments Pro 27
sort code for Canada, Germany, and UK 28

T

test accounts 17
test email 16
test tools 43
testing
  address verification 52
  APIs 39, 48
  billing a customer 36
  Buy Now 32
  credit card validation 56
  eCheck 35
  negative 47
  NVP 39
  paying 36
  Send Money 36
  verifying a payment 32
  verifying a refund 34
  Website Payments 31
testing payment review features 59
Transit Number 28

U

UK bank account info 28

W

Website Payments 31
Website Payments Pro 17, 27
Website Payments Pro test accounts 27

Ex. 1008 / Page 64 of 64
M&A Ventures, LLC et al