

# PayPal Services

## User Guide

September 2016

**CyberSource<sup>®</sup>**  
**the power of payment**

## CyberSource Contact Information

For technical support questions, go to the Home page in the Business Center to see the contact information appropriate for your account.

Visit the Business Center, your central location for managing your online payment transactions, at <https://businesscenter.cybersource.com>.

For general information about our company, products, and services, go to <http://www.cybersource.com>.

For sales questions about any CyberSource Service, email [sales@cybersource.com](mailto:sales@cybersource.com) or call 650-432-7350 or 888-330-2300 (toll free in the United States).

## Copyright

© 2016 CyberSource Corporation. All rights reserved. CyberSource Corporation ("CyberSource") furnishes this document and the software described in this document under the applicable agreement between the reader of this document ("You") and CyberSource ("Agreement"). You may use this document and/or software only in accordance with the terms of the Agreement. Except as expressly set forth in the Agreement, the information contained in this document is subject to change without notice and therefore should not be interpreted in any way as a guarantee or warranty by CyberSource. CyberSource assumes no responsibility or liability for any errors that may appear in this document. The copyrighted software that accompanies this document is licensed to You for use only in strict accordance with the Agreement. You should read the Agreement carefully before using the software. Except as permitted by the Agreement, You may not reproduce any part of this document, store this document in a retrieval system, or transmit this document, in any form or by any means, electronic, mechanical, recording, or otherwise, without the prior written consent of CyberSource.

## Restricted Rights Legends

**For Government or defense agencies.** Use, duplication, or disclosure by the Government or defense agencies is subject to restrictions as set forth the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013 and in similar clauses in the FAR and NASA FAR Supplement.

**For civilian agencies.** Use, reproduction, or disclosure is subject to restrictions set forth in subparagraphs (a) through (d) of the Commercial Computer Software Restricted Rights clause at 52.227-19 and the limitations set forth in CyberSource Corporation's standard commercial agreement for this software. Unpublished rights reserved under the copyright laws of the United States.

## Trademarks

CyberSource, The Power of Payment, CyberSource Payment Manager, CyberSource Risk Manager, CyberSource Decision Manager, CyberSource Connect, Authorize.Net, and eCheck.net are trademarks and/or service marks of CyberSource Corporation. All other brands and product names are trademarks or registered trademarks of their respective owners.

# Contents

## **Recent Revisions to This Document 6**

### **About This Guide 7**

Audience and Purpose 7

Conventions 7

    Note and Important Statements 7

    Text and Command Conventions 8

Related Documents 8

    PayPal References 8

    CyberSource Guides 8

Customer Support 9

---

## **Chapter 1 Introduction 10**

    PayPal Payments 10

    PayPal Credits 13

    Order Tracking 14

        Reconciliation IDs 14

        Request IDs 14

    Transaction Reply Information 14

        Information from PayPal: Payment Data Transfer (PDT) 14

        Information from PayPal: Instant Payment Notification (IPN) 15

        Information from CyberSource: Reports 16

        Information from CyberSource: Transaction Details in the Business Center 17

        PayPal Email Messages 17

    Chargebacks 18

---

<b>Chapter 2</b>	<b>Setting Up Your System</b>	<b>19</b>
	Opening and Configuring Your PayPal Account	19
	Disabling Email Notifications	19
	Disabling Electronic Checks	19
	Setting Your Credit Card Statement Name	20
	Entering the IPN URLs	20
	Enabling API Access	21
	Enabling Auto Return	21
	Enabling the Settlement File	22
	Configuring Your CyberSource Account	22
	Configuring the PayPal Return Fields	22
	Existing Merchants	22
	New Merchants	22
	Enabling Cookies	23
	Collecting Shipping Information	23

---

<b>Chapter 3</b>	<b>Requesting Services</b>	<b>24</b>
	Creating Buttons	24
	Requesting the Service	24
	PayPal's HTML Variables for a Regular Payment Button	24
	Sending the Shipping Address for a Regular Payment Button	25
	Specifying Shipping and Handling Charges for a Regular Payment Button	26
	Specifying Tax for a Regular Payment Button	27
	Interpreting CyberSource's Reply	28
	Receiving PayPal's POST Request	29
	Request Fields	30
	Reply Fields	40
	Processing a Credit	41
	Request Fields	42
	Reply Fields	43
	Reason Codes	44
	Testing	46

---

<b>Chapter 4</b>	<b>Creating a Shopping Cart Button</b>	<b>47</b>
------------------	--	-----------

---

<b>Appendix A</b>	<b>Examples</b>	<b>49</b>
	Name-Value Pair Examples	49
	Creating a Regular Payment Button	49
	Processing a Credit	51
	Creating a Shopping Cart Button	52
	XML Examples	53
	Creating a Regular Payment Button	53
	Processing a Credit	55
	Creating a Shopping Cart Button	56

---

<b>Appendix B</b>	<b>PayPal Reply Variables</b>	<b>57</b>
	PDT Reply Variables	57
	IPN Variables for Regular Payments	58

---

<b>Appendix C</b>	<b>Product Codes</b>	<b>65</b>
-------------------	----------------------	-----------

<b>Index</b>	<b>66</b>
--------------	-----------

# Recent Revisions to This Document

Release	Changes
September 2016	This revision contains only editorial changes and no technical updates.
December 2015	Removed hosted order page information. Changed the guide title to <i>PayPal Services with CyberSource Essentials (Simple Order API)</i> .
August 2013	Removed incorrect information about Customer Support. Updated the information about request tokens.
September 2012	This revision contains only editorial changes and no technical updates.
April 2011	Updated the PayPal account setup information in " <a href="#">Enabling API Access</a> ," page 21.
June 2010	Added CyberSource API usernames: <ul style="list-style-type: none"><li>■ Production: <b>paypal_cybersource_api1.cybersource.com</b></li><li>■ Testing: <b>cybersource_paypal_api1.cybersource.com</b></li></ul>

# About This Guide

## Audience and Purpose

---

This guide is written for application developers who want to use the CyberSource Simple Order API to integrate PayPal into their order management system.

Implementing PayPal services requires software development skills. You must write code that uses API request and reply fields to integrate PayPal services into your existing order management system.

## Conventions

---

### Note and Important Statements

**Note**

---

A *Note* contains helpful suggestions or references to material not contained in the document.

---

**Important**

---

An *Important* statement contains information essential to successfully completing a task or learning a concept.

---

## Text and Command Conventions

Convention	Usage
<b>bold</b>	<ul style="list-style-type: none"> <li>Field and service names in text; for example: Include the <b>ics_applications</b> field.</li> <li>Items that you are instructed to act upon; for example: Click <b>Save</b>.</li> </ul>
monospace	<ul style="list-style-type: none"> <li>XML elements.</li> <li>Code examples and samples.</li> <li>Text that you enter in an API environment; for example: Set the <b>davService_run</b> field to <code>true</code>.</li> </ul>

## Related Documents

### PayPal References

The PayPal documents are available on the PayPal web site:

- *Sandbox User Guide*—PayPal Sandbox test environment
- *Merchant User Manual and Integration Guide*—Your PayPal profile setup, regular payments, Payment Data Transfer, and Instant Payment Notification

### CyberSource Guides

- *Getting Started with CyberSource Essentials* provides information about account management, technical resources, and basics about the CyberSource API. ([PDF](#) | [HTML](#))
- *Business Center User Guide* provides information about configuring account settings and searching for order information. ([PDF](#) | [HTML](#))
- *Credit Card Services User Guide* provides information about the API for accessing CyberSource services. ([PDF](#) | [HTML](#))
- *Reporting User Guide* provides information about using CyberSource reports. ([PDF](#) | [HTML](#))

Refer to the Support Center for complete CyberSource technical documentation:

[http://www.cybersource.com/support\\_center/support\\_documentation](http://www.cybersource.com/support_center/support_documentation)



# Customer Support

---

For support information about any CyberSource service, visit the Support Center:

<http://www.cybersource.com/support>

# Introduction

If you are not already familiar with how PayPal works, consider opening a personal PayPal account to understand the customer's experience. In general, a customer opens a PayPal account and adds one or more funding sources, such as a credit card, or an electronic checking account. When the customer chooses to pay with PayPal, they must choose which funding source to use for the payment. If the customer receives payments and accumulates stored value in their PayPal Account, they may also choose to pay with those stored funds. For more information, go to [www.paypal.com](http://www.paypal.com).

**Note**

Before you can process any PayPal payments, you must open and configure a PayPal business account and configure your CyberSource account to use PayPal as described in [Chapter 2, "Setting Up Your System,"](#) on page 19.

When you open your PayPal business account, PayPal assigns you a PayPal account manager who will assist you with configuring your PayPal account.

## PayPal Payments

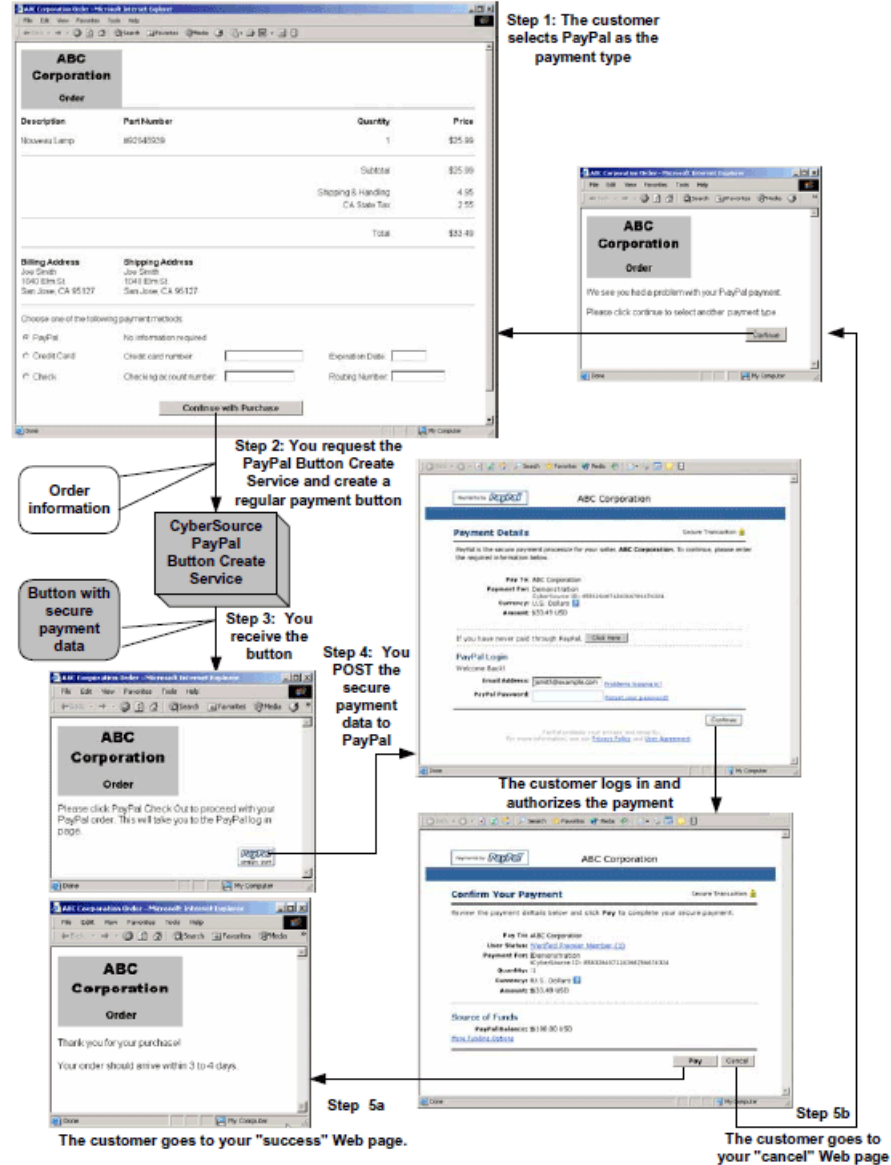
You can process regular PayPal payments. This is a standard payment for goods and services. You can also process credits (refunds).

The following sequence constitutes the flow for accepting regular PayPal payments at your site. See [Figure 1, page 12](#), for a diagram of the payment flow.

- 1 The customer shops at your web store and selects items to purchase.
- 2 You collect the billing and shipping addresses and calculate tax and shipping.
- 3 The customer chooses PayPal as the payment type from the list of payment types you provide.
- 4 You send the order information to CyberSource in a request for the Button Create Service, indicating that you want a button for a regular PayPal payment.

- 5 In the reply, you receive the button (a self-contained form) containing the secure payment data PayPal requires. Note that the service returns two buttons to you: an encrypted version of the button (to use in production) and an unencrypted version (to use when testing or troubleshooting).
- 6 The customer clicks the button, which sends the secure payment data to PayPal in a POST request while taking the customer to the PayPal web site to log in and authorize the payment.
- 7 Depending on the result:
  - PayPal directs the customer to the success page.
  - If the customer clicks cancel, PayPal directs the customer to the cancellation page, which instructs the customer to choose a new payment type.

Figure 1 Processing a Regular PayPal Payment



After PayPal processes the payment:

- PayPal sends you an email notification of the payment (you can turn this feature off).
- PayPal sends the customer an email receipt for the payment.
- Your PayPal account reflects the payment.
- CyberSource receives PayPal's Instant Payment Notification (IPN) message for the payment. See ["Information from PayPal: Instant Payment Notification \(IPN\)," page 15](#).
- CyberSource forwards you the IPN message if you configure your CyberSource account for it. See ["Configuring Your CyberSource Account," page 22](#).

- The information from the IPN is included in CyberSource's Payment Events Report. See ["Information from CyberSource: Reports," page 16.](#)
- You can view payment details in the Business Center. See ["Information from CyberSource: Transaction Details in the Business Center," page 17.](#)

## PayPal Credits

---

You can perform only one credit for an order, for either a partial amount or the full amount of the payment. You can refund a customer's money through the Business Center or by using an API to request the PayPal credit service:

- Business Center—search for and retrieve the original payment request from the database by using the request ID or another identifier for the payment. Then click a button in the Business Center interface to request the credit. You must perform the credit within 60 days of the payment request.
- PayPal credit service—provide the request ID from the original payment so that CyberSource can find the payment information in the database. You must perform the credit within 60 days of the payment request.

After a credit is processed:

- CyberSource receives PayPal's Instant Payment Notification (IPN) message for the credit. See ["Information from PayPal: Instant Payment Notification \(IPN\)," page 15.](#)
- CyberSource forwards you the IPN message if you configure your CyberSource account for it. See ["Configuring Your CyberSource Account," page 22.](#)
- The information from the IPN is included in CyberSource's Payment Events Report. See ["Information from CyberSource: Reports," page 16.](#)
- You can view credit details in the Business Center. See ["Information from CyberSource: Transaction Details in the Business Center," page 17.](#)

# Order Tracking

---

For general information about order tracking, see *Getting Started with CyberSource Essentials* ([PDF](#) | [HTML](#)).

## Reconciliation IDs

The following table lists the field names for the PayPal reconciliation IDs in the API reply messages.

**Table 1 Reconciliation ID Reply Field Names**

Service	Field Name
Button create	paypalButtonCreateReply_reconciliationID
Credit	paypalCreditReply_reconciliationID

## Request IDs

For all PayPal services, the request ID is returned in the reply message in the **requestID** field.

The field names for the PayPal request IDs in the credit request messages is **paypalCreditService\_payPalPaymentRequestID**.

# Transaction Reply Information

---

## Information from PayPal: Payment Data Transfer (PDT)

PayPal's Payment Data Transfer is an optional feature you can use if it fits your implementation. You use PDT to display payment transaction details to customers when they are redirected to your site after completing a regular payment at PayPal's site. If you want to use PDT, you must enable Auto Return. See "[Enabling Auto Return](#)," page 21.

You might choose to use PDT because it is one way to determine whether to ship the goods.



**Important**

If the customer uses a delayed payment type such as an electronic check, PDT information is not sufficient because it typically takes several days for the check to clear.

Another disadvantage of PDT is that the customer can close the browser before the redirect to your site is complete, causing you to miss PDT information.

---

The information you receive with PDT is also available in CyberSource's reports and in the Instant Payment Notification message. CyberSource recommends that you use one of these methods instead of PDT if you need a reliable order fulfillment indicator.

For information about setting up and using PDT, see PayPal's *Merchant User Manual and Integration Guide*. For information about the content of the PDT reply variables that you receive, see "[PDT Reply Variables](#)," page 57.

## Information from PayPal: Instant Payment Notification (IPN)

PayPal's Instant Payment Notification (IPN) provides immediate notification about your payments and any events relating to them. CyberSource automatically receives all of the IPN messages for your PayPal account and uses the information to populate CyberSource's reports. Because CyberSource receives your IPN messages for you, you do not need to set up your PayPal account to receive them.

You can configure your CyberSource account so that you are forwarded your IPN messages as soon as CyberSource receives them. You might want to do this if you need to ship the ordered goods immediately, and you cannot wait for the confirmation that comes in the CyberSource reports. When you configure your CyberSource account, you give CyberSource the secure URL where you want to receive the IPN messages.



**Important**

The Payment Events Report, which is described in "[Information from CyberSource: Reports](#)," page 16, includes the information from every IPN message that is forwarded to you. If the system that receives your IPN messages is not available, PayPal forwards each IPN message again at specific intervals until your system receives it or until PayPal's system reaches its retry limit. Each of these instances is included in the Payment Events Report, so multiple occurrences of the same information appear in the report if your system does not receive the IPN message the first time it is forwarded to you.

---

To use IPN message forwarding, your server certificate must be issued by a Certificate Authority (CA) that is known to CyberSource. If it is not, CyberSource cannot authenticate

your server certificate during the handshake with your server. CyberSource supports all of the CAs that are generally used. Check with CyberSource Customer Service to make sure your certificate meets these requirements.

For regular payments, you receive an IPN message when these events occur:

- Payment
- Electronic check clears
- Payment reversal
- Payment reversal canceled
- Payment refunded

See "[IPN Variables for Regular Payments](#)," page 58, for a list of IPN variables you receive for a regular payment.

## Information from CyberSource: Reports

The CyberSource reports listed below include information about your PayPal transactions. The information in the reports comes from your API requests and from the IPN messages that PayPal sends. For detailed information about the reports, see *Reporting User Guide* ([PDF](#) | [HTML](#)).

- **Payment Events Report**—shows the latest status of your PayPal payments and credits and whether you can fulfill the order. It is a daily report that includes any new information from the past 24 hours that PayPal has about any of your transactions. For example, when you request a payment, if the payment is pending (which happens if the customer pays with an electronic check), the transaction is included in the report for the first time with a status of pending. The next time the transaction is included in the report (which could be several days later), it has a status of completed or denied, which indicates whether you can ship the goods. The transaction is included again in the report if other events occur. For example, it is included again if the customer initiates a reversal or if you initiate a refund.





If you perform any PayPal transactions outside of the CyberSource interface, the IPN messages for those transactions are still forwarded to CyberSource. The data from those transactions are included in the Payment Events Report but not in the Business Center. To reduce inconsistency within your transaction management system, you should perform all of your PayPal transactions through CyberSource.

The Payment Events Report includes the information from every IPN message that is forwarded to you. If the system that receives your IPN messages is not available, PayPal forwards each IPN message at specific intervals until your system receives it or until PayPal's system reaches its retry limit. Each of these instances is included in the Payment Events Report, so multiple occurrences of the same information appear in the report if your system does not receive the IPN message the first time it is forwarded to you.

- Capture Detail Report—lists the card type as `PayPal` for your PayPal transactions.

If you are already subscribed to these reports, PayPal transactions automatically appear in the reports. If you are a new user of these reports, you can subscribe to and obtain the reports in the Business Center.

For general information about the reports, see the online help in the Business Center.

## Information from CyberSource: Transaction Details in the Business Center

You can view the details of your PayPal transactions in the Business Center just as you can for other payment types. You can search for transactions by date, application type (PayPal Button Create, PayPal Credit, PayPal Payment), customer name, and other transaction identifiers.

## PayPal Email Messages

You automatically receive email notifications for any successful payments, canceled payments, and pending payments. You can turn off these notifications by disabling them in your PayPal profile. For more information, see "[Disabling Email Notifications](#)," page 19.

# Chargebacks

---

PayPal offers several services related to chargebacks:

- If the customer chooses a credit card as the funding source for the PayPal payment, they have the normal chargeback dispute rights. If the customer disputes the charge, PayPal performs the initial chargeback processing and contacts you for documentation.
- PayPal offers a Buyer Complaint Process that applies to all purchases regardless of the funding source. When a customer files a complaint, PayPal investigates and contacts you for documentation.
- PayPal also provides a service called the Seller Protection Plan (SPP), which helps protect merchants against chargebacks due to fraud. The service is available only to qualifying merchants, and only for orders for which the shipping address matches a confirmed address on file at PayPal. CyberSource indicates whether the address is confirmed or unconfirmed in the list of transaction details, which you can view by searching for the transaction in the Business Center.

For more information about these services, contact your PayPal Account Manager, or visit PayPal's Security Center (go to [www.paypal.com](http://www.paypal.com) and click **Security Center** at the bottom of the page).

# Setting Up Your System

This chapter describes the PayPal settings needed to make your PayPal and CyberSource accounts work together. To configure additional PayPal settings, see PayPal's *Merchant User Manual and Integration Guide*, which is available at [www.paypal.com](http://www.paypal.com).

## Opening and Configuring Your PayPal Account

---

If you do not already have a PayPal business account, go to [www.paypal.com](http://www.paypal.com) to open one. To configure your PayPal account, log in and click the **Profile** tab.

### Disabling Email Notifications

If you do not want to receive an email message every time a customer pays with PayPal at your store, you can turn off email notifications. On the Profile Summary page, under Account Information, click **Notifications**. Under Payment Notifications, check the following boxes:

- I receive money with PayPal
- I receive PayPal Website Payments and Instant Purchase

### Disabling Electronic Checks

Depending on your business rules or the type of products you sell, you may not want to let customers use their electronic checking accounts when paying through PayPal. Checks typically take 3 to 4 business days to clear. Use the Business Center or the Payment Events Report to verify that a check has cleared.

To disable acceptance of electronic checks, go to the Profile Summary page. Under Account Information, click **Payment Receiving Preferences**. Under Block Payments funded by, check the box for **eCheck for PayPal Website Payments and Smart Logo payments**.

## Setting Your Credit Card Statement Name

Whenever a customer funds a payment with a credit card, your name is included on the customer's credit card statement in the purchase description. Setting your credit card statement name helps reduce chargebacks and customer confusion.

**Note**

*PayPal \** is appended at the beginning of the credit card statement name. For example, *YourCompany* is included as *PayPal \*YourCompany*.

---

To set the credit card statement name, go to the Profile Summary page. Under Account Information, click **Payment Receiving Preferences**. In the **Credit Card Statement Name** field, enter your company name.

## Entering the IPN URLs

If you want to receive IPN notifications so that you can view the payment information in the Business Center, return to the Profile Summary page.

**Note**

You can return to this page to change the URL as necessary.

---

- Step 1** Go to the Profile Summary page.
- Step 2** Under Selling Preferences, click **Instant Payment Notification Preferences**.
- Step 3** Click **Edit**.
- Step 4** Check the **Instant Payment Notification** box and enter one of these URLs:
  - For CyberSource's test environment: <https://paypaltest.ic3.com/ipn>
  - For CyberSource's production environment: <https://paypal.ic3.com/ipn>
- Step 5** Click **Save**.

When the message *You have successfully activated Instant Payment Notification* appears, you can proceed to the next section.

---

## Enabling API Access

To process PayPal payments and credits through the CyberSource API, you must enable CyberSource to act on your behalf in the PayPal system.

- 
- Step 1** Go to the Profile Summary page.
- Step 2** Under Account Information, click **API Access**.
- Step 3** Click **Grant API Permission**.
- Step 4** For testing, enter **cybersource\_paypal\_api1.cybersource.com**, which is the CyberSource API account username.  
For live transactions, enter **paypal\_cybersource\_api1.cybersource.com**.
- Step 5** Click **Lookup**.
- Step 6** Select the following permissions:
- Use Express Checkout to process payments.
  - Issue a refund for a specific transaction.
  - Authorize and capture your PayPal transactions.
  - Create and manage PayPal payment buttons on your website.
  - Obtain information about a single transaction.
  - Initiate a transaction based on a prior transaction or existing billing agreement.
  - Create and manage Recurring Payments.
  - Obtain authorization for pre-approved payments and initiate pre-approved transactions.
  - Dynamically encrypt PayPal payment buttons on your web site.
- Step 7** Click **Add**.
- Step 8** To edit or view permissions, go to the Manage Third Party Access page and click **Edit Third Party**.
- 

## Enabling Auto Return

CyberSource recommends that you use PayPal's Auto Return, which returns the customer immediately to your web site at the conclusion of the purchase. With Auto Return, the typical PayPal-hosted payment complete page is replaced with a page on your site, allowing you to control the customer's experience at the end of the purchase and perform any follow-on sales or marketing activities.

To enable Auto Return, go to the Profile Summary page. Under Selling Preferences, click **Website Payment Preferences**. Provide your Return URL, which will be used to redirect your customers upon payment completion. For more information about Auto Return, see PayPal's *Merchant User Manual and Integration Guide*.

You can override the Auto Return URL that you have specified by using a particular API field in your Button Create Service request. For more information, see the description of `paypal_return` in [Table 4, page 30](#).

## Enabling the Settlement File

Your PayPal payments and credits are reflected in your CyberSource reports. For many merchants, this is sufficient to support reconciliation. However, if you prefer additional detail for reconciliation, you might want to use PayPal's Settlement File. In particular, you might want to use it if you are accepting payments in multiple currencies, as it documents the exchange rate conversion. Contact your PayPal Account Manager for more information.

# Configuring Your CyberSource Account

---

The configuration process differs slightly for existing and new merchants.

## Configuring the PayPal Return Fields

The PayPal return fields `paypal_return` and `paypal_cancel_return` are required for API users. For information about integrating with CyberSource's API, see "[Requesting Services](#)," page 24.

### Existing Merchants

Your PayPal ID and IPN URL are transferred to the new implementation. You need to configure the PayPal return fields only if you have not done so already. See "[Information from PayPal: Instant Payment Notification \(IPN\)](#)," page 15.

### New Merchants

You must call CyberSource Customer Support to provide your PayPal ID and IPN URL. After that, you must configure the PayPal return fields.

## Enabling Cookies

---

- Step 1** Enable cookies in your web browser.
- 

## Collecting Shipping Information

---

- Step 1** Include the shipping address when you create a regular payment button.
- When collecting information about the order, CyberSource recommends that you collect the shipping address information even though it is optional. PayPal compares the shipping address that you provide to the customer's list of confirmed addresses. If the address is one of the confirmed addresses, the transaction may be eligible for chargeback protection under PayPal's Seller Protection Policy. See PayPal's Security Center for more information.
-

# Requesting Services

## Creating Buttons

---

The `paypalButtonCreateService` lets you create a button for processing a regular payment with an aggregate amount for the order (PayPal's Buy Now button).



**Note**

PayPal also has a Shopping Cart button that uses individual item information and amounts instead of an aggregate order total. This chapter discusses how to create PayPal's Buy Now button. For information about requesting a Shopping Cart button, see [Chapter 4, "Creating a Shopping Cart Button," on page 47](#).

---

For more information about regular payments, see ["PayPal Payments," page 10](#).

## Requesting the Service

To request the service, send a request with `paypalButtonCreateService_run=true`. Use the `paypalButtonCreateService_buttonType` field to indicate which type of button you want. See [Appendix A, "Examples," on page 49](#) for example requests.

## PayPal's HTML Variables for a Regular Payment Button

The regular payment button (PayPal's Buy Now button) that CyberSource creates includes a list of HTML variables that give transaction information to PayPal and that control the display of the PayPal site when the customer goes there to approve the payment. CyberSource adds "`paypal_`" before the name of each variable to create the corresponding CyberSource API field that you use when creating the button. For example, PayPal has a variable called `return`. The field you include in your request to CyberSource is `paypal_return`. See the `paypal_...` fields in [Table 4, page 30](#).

Not all of the available PayPal HTML variables are listed in [Table 4](#); only the basic variables you need to process a payment are included. For the entire list of HTML variables available for use with a Buy Now button, see PayPal's *Merchant User Manual and Integration Guide*. If PayPal's guide lists any variables that you want to use that are not already listed in [Table 4](#), simply add the corresponding `paypal_<variable_name>`



field to your **paypalButtonCreateService** request to include that variable in the button code. This also allows you to easily use any new Buy Now button variables that PayPal might create in the future. CyberSource does not validate the content of the HTML variable API fields that you send.



**Important**

For some of the available HTML variables, CyberSource automatically assigns values and does not need your input. Specifically, CyberSource sets the values for `cmd`, `business`, `custom`, `invoice`, and `notify_url` and does not provide corresponding API fields for you to use. If you send fields called **paypal\_cmd**, **paypal\_business**, **paypal\_custom**, **paypal\_invoice**, or **paypal\_notify\_url** in your request, the request is rejected.

Some of CyberSource's regular API fields for specifying amounts and item-level information are similar to or duplicate the function of some of PayPal's HTML fields. For example, PayPal has an HTML variable called `amount`. CyberSource has similar API fields called **purchaseTotals\_grandTotalAmount** and **item\_#\_unitPrice** (and one of these two fields is required in the **paypalButtonCreateService** request). CyberSource automatically populates the PayPal `amount` variable that is included in the button code with a value based on the **purchaseTotals\_grandTotalAmount** or **item\_#\_unitPrice** values that you provide in your **paypalButtonCreateService** request.

However, you could theoretically include **paypal\_amount** in your request *in addition* to a **purchaseTotals\_grandTotalAmount** or **item\_#\_unitPrice** because CyberSource allows you to pass most of the available PayPal variables generically as **paypal\_<variable name>** through the CyberSource API. But you should not do it because CyberSource will then include two values for the `amount` variable in the button code: one based on the **purchaseTotals\_grandTotalAmount** or **item\_#\_unitPrice** values, and one based on the **paypal\_amount** field you sent, which might lead to unpredictable amount values being displayed at PayPal's site when the customer goes there to approve the payment.

If a particular PayPal HTML variable is being populated by CyberSource based on the value you provide for a similar CyberSource API field, the description for that PayPal variable in [Table 4, page 30](#), will say so. For example, see the description for **paypal\_amount** in the table.

## Sending the Shipping Address for a Regular Payment Button

When you create a regular payment button, you should include the shipping address in the request even though it is optional. PayPal compares the shipping address you provide to the customer's list of confirmed addresses. If the address is one of the confirmed addresses, the transaction may be eligible for chargeback protection under PayPal's Seller Protection Policy. See PayPal's Security Center at [www.paypal.com](http://www.paypal.com) for more information.

If you do not send a shipping address in your request, CyberSource does not substitute the billing address for the shipping address when sending the information to PayPal.

To determine whether the shipping address was confirmed or unconfirmed, search for the transaction in the Business Center. The transaction details include whether the address was confirmed or unconfirmed.

## Specifying Shipping and Handling Charges for a Regular Payment Button

CyberSource and PayPal both have methods that you can use to specify freight charges (shipping and handling charges). When creating a regular payment button for an order with freight charges, you must choose which method you want to use to specify the freight amount. You might already be familiar with CyberSource's methods if you process other payment types with CyberSource. The following table describes your choices. CyberSource's methods override any PayPal profile-based shipping and handling settings you have.



**Important**

You should choose one of these methods and not send CyberSource shipping and handling fields as well as PayPal HTML variables for shipping and handling. If you do, the customer may see unexpected amounts for the shipping and handling when they go to PayPal's site to approve the payment.

**Table 2 Methods for Specifying Shipping and Handling Charges**

Method	Description
<b>CyberSource:</b> Using a total freight amount	If you are using CyberSource's <b>purchaseTotals_grandTotalAmount</b> field to provide a total amount for the order, then you must use the <b>purchaseTotals_freightAmount</b> field to give the total shipping and handling for the order. CyberSource maps it to the PayPal HTML variable <code>shipping</code> . This method overrides any profile-based amount you have set. See the PayPal: Overriding the profile-based freight amount method below.
<b>CyberSource:</b> Using an item for the freight amount	If you are using item-level information instead of the <b>purchaseTotals_grandTotalAmount</b> field, you must create at least one separate item for the shipping and/or handling amounts. For more details, see the information about creating requests in <i>Getting Started with CyberSource Essentials</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> ). CyberSource will sum the amounts for items where the <b>item_#_productCode=shipping_only</b> or <b>shipping_and_handling</b> and assign the value to the PayPal HTML variable <code>shipping</code> . CyberSource will sum the amounts for items where the <b>item_#_productCode=handling_only</b> and assign the value to the PayPal HTML variable <code>handling</code> . This method overrides any profile-based amount you have set. See the PayPal: Overriding the profile-based freight amount method below.

**Table 2 Methods for Specifying Shipping and Handling Charges (Continued)**

Method	Description
<b>PayPal:</b> Using a profile-based freight amount	You can configure your PayPal profile to use flat shipping and handling amounts based on the overall order total. See PayPal's <i>Merchant User Manual and Integration Guide</i> for more information.
<b>PayPal:</b> Overriding the profile-based freight amount	You can configure your PayPal account so that you can override the flat profile-based shipping and handling amounts by using specific HTML variables when creating the button. PayPal's <code>shipping</code> , <code>handling</code> , and <code>shipping2</code> HTML variables let you do this. See the descriptions of the corresponding CyberSource API fields <code>paypal_shipping</code> , <code>paypal_handling</code> , and <code>paypal_shipping2</code> in <a href="#">Table 4, page 30</a> .

## Specifying Tax for a Regular Payment Button

CyberSource and PayPal both have methods with which to specify the tax for an order. When creating a regular payment button for an order with tax, you choose which method you want to use to specify the tax amount. You might already be familiar with CyberSource's methods if you process other payment types with CyberSource. The following table describes your choices. CyberSource's methods override any PayPal profile-based tax settings you have.



**Important**

You should choose one of these methods and not send CyberSource tax fields as well as PayPal HTML variables for tax. If you do, the customer may see unexpected amounts for the tax when they go to PayPal's site to approve the payment.

**Table 3 Methods for Specifying an Order's Tax**

Method	Description
<b>CyberSource:</b> Using a total tax amount	If you are using CyberSource's <code>purchaseTotals_grandTotalAmount</code> field to provide a total amount for the order, then you must use the <code>purchaseTotals_taxAmount</code> field to give the total tax for the order. This method overrides any profile-based amount you have set. See the PayPal: Overriding the profile-based tax amount method below.
<b>CyberSource:</b> Using an item-level tax amount	If you are using item-level information instead of the <code>purchaseTotals_grandTotalAmount</code> field, you must specify the total tax for each item in <code>item_#_taxAmount</code> . See the information about items and grand totals in <i>Getting Started with CyberSource Essentials</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> ). This method overrides any profile-based amount you have set. See the PayPal: Overriding the profile-based tax amount method below.
<b>PayPal:</b> Using a profile-based tax amount	You can configure your PayPal profile to use certain tax amounts based on the customer's country and state. See PayPal's <i>Merchant User Manual and Integration Guide</i> for more information.
<b>PayPal:</b> Overriding the profile-based tax amount	You can configure your PayPal account so that you can override the profile-based tax amount by using a the <code>tax</code> HTML variable when creating the button. See the description of the corresponding CyberSource API field <code>paypal_tax</code> in <a href="#">Table 4, page 30</a> .

## Interpreting CyberSource's Reply

CyberSource returns to you an encrypted version and an unencrypted version of the button in the `paypalButtonCreateReply_encryptedFormData` and `paypalButtonCreateReply_unencryptedFormData` fields. Use the encrypted version when in production and the unencrypted version when troubleshooting or testing your system. See [Appendix A, "Examples," on page 49](#) for reply examples. You insert the button into your HTML page like this:

---

```
<html><body>

<!-- Insert your page header -->

Click PayPal Checkout to proceed with your PayPal payment.

This will take you to the PayPal login page.

<!-- Replace the "%s" below with the button, which is a self-contained form that
CyberSource returns to you. -->

%s

</body></html>
```

---

The encrypted version of the button looks similar to this:

---

```
<form action="https://www.paypal.com/cgi-bin/webscr" method="post"><input
type="image" src="https://www.paypal.com/en_US/i/btn/x-click-but23.gif"
border="0" name="submit"><input type="hidden" name="cmd" value="_s-xclick"><input
type="hidden" name="encrypted" value="

-----BEGIN PKCS7-----
MIIGTQYJKoZIhvcNAQcDoIIGPjCCBjoCAQAxggE6MIIBNgIBADCBnjCBmDELMAkGA1UEBhMCVVMxEzARBgNVB
AgTCkNhbGlmb3JuaWEwExETAPBgNVBACTCFNhbiBkb3NlMRUwEwYDSIb3DQEBAQUABIGAg0SFsADkAz5l03qK8w
e8z3zt86F9IZB8q8J+oCSjmBWgrZdh+VKHgPL2SKuRGrifwXDCGFOJonjYK5EKExeSCmR/eZRUwzIpUmnKAY/

r7Hgzd/e1Is1JuFZ9/iKQO2hK/wRq5VYIL22MGn0fY8GZ6CBmM76ceYojOe/
XmlpUOLjANQnx2MVMi85hhpMAcaM-----END PKCS7-----" </form>
```

---



### Note

The encrypted information in the above example has been shortened for illustration. The actual length of the information is about 2000-3000 characters.

The unencrypted version of the button looks similar to this:

---

```
<form action="https://www.paypal.com/cgi-bin/webscr" method="post"><input
type="image" src="https://https://www.paypal.com/en_US/i/btn/x-click-
but23.gif" border="0" name="submit"><input type="hidden" name="cmd" value="_s-
xclick"><input type="hidden" name="business" value="jdoe@example.com"><input
type="hidden" name="first_name" value="Larry"><input type="hidden" name="last_name"
value="Smith"><input type="hidden" name="address1" value="37 Main St."><input
type="hidden" name="address2" value="Suite 2"><input type="hidden" name="city"
value="Bloomington"><input type="hidden" name="state" value="IN"><input type="hidden"
name="zip" value="47404"><input type="hidden" name="amount" value="0.00"><input
type="hidden" name="tax" value="0"><input type="hidden" name="handling"
value="0.00"><input type="hidden" name="shipping" value="0.00"><input type="hidden"
name="item_number" value="123454"><input type="hidden" name="cancel_return"
value="http://cancel.example.com"><input type="hidden" name="undefined_quantity"
value="1"><input type="hidden" name="quantity" value="5"><input type="hidden"
name="return" value="http://success.example.com"><input type="hidden" name="item_
name" value="book"><input type="hidden" name="shipping2" value="0.00"><input
type="hidden" name="currency_code" value="USD"><input type="hidden" name="bn"
value="CyberSource"><input type="hidden" name="notify_url" value="http://example.com/
ipn"><input type="hidden" name="invoice" value="0000028962"><input type="hidden"
name="custom" value="0000028962,1141312425560167905065,001"></form>
```

---

## Receiving PayPal's POST Request

If you are using PayPal's Payment Data Transfer (PDT), you receive a POST request from PayPal when the customer is redirected back to your site after approving a regular payment. See ["Information from PayPal: Payment Data Transfer \(PDT\)," page 14](#), for more information. The POST request contains a variable called `st` that indicates whether you can fulfill the order. See ["PDT Reply Variables," page 57](#), for a full list of information you receive.

## Request Fields

The following table lists the request fields for creating buttons.

**Table 4 Button Create Request Fields**

Request Field	Description	Use With Button	Required/Optional	Data Type & Length
billTo_city	City of the billing address.	Both	Required	String (50)
billTo_country	Country of the billing address. Use the two-character ISO codes. See <a href="#">ISO Standard Country Codes</a> for a list of codes.	Both	Required	String (2)
billTo_email	Customer's email address, including the full domain name (for example, <code>jdoe@example.com</code> ).	Both	Optional	String (255)
billTo_firstName	Customer's first name.	Both	Required	String (60)
billTo_lastName	Customer's last name.	Both	Required	String (60)
billTo_postalCode	Postal code for the billing address. The postal code must consist of 5 to 9 digits.  If the billing country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] Example: 12345-6789  If the billing country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space] [numeric][alpha][numeric] Example: A1B 2C3	Both	Required if country is U.S. or Canada	String (10)
billTo_state	State or province of the billing address. Use the two-character codes. See <a href="#">State, Province, and Territory Codes for the United States and Canada</a> for a list of valid codes.	Both	Required if country is U.S. or Canada	String (2)
item_#_productCode	Type of product. The default value is default. See <a href="#">"Product Codes," page 65</a> , for a list of valid values. If you set it to a value other than default, stored_value, or any of the values related to shipping and/or handling, the <b>item_#_quantity</b> , <b>item_#_productName</b> , and <b>item_#_productSKU</b> fields are required.	Regular payment	Optional	String (30)

- 1 Required if any shipping information is included.
- 2 Optional, but CyberSource encourages you to send the shipping address to increase chances that the transaction will be covered under PayPal's Seller Protection Policy. See "Sending the Shipping Address for a Regular Payment Button," page 25.
- 3 Required if the **shipTo\_country** value is US or CA.

Table 4 Button Create Request Fields (Continued)

Request Field	Description	Use With Button	Required/Optional	Data Type & Length
item_#_productName	<p>Product's name. This information is not displayed in the button but is displayed on the transaction details page in the Business Center.</p> <p>Required if the <b>item_#_productCode</b> value is NOT <code>default</code>, <code>stored_value</code>, or one of the values related to shipping and/or handling.</p> <p><b>Note</b> This value is NOT used for the <code>item_name</code> variable in the button; <b>paypal_item_name</b> is used for that. You may include both <b>item_#_productName</b> and <b>paypal_item_name</b> in the request.</p>	Regular payment	See description	String (30)
item_#_productSKU	<p>Product's identifier code. This information is not displayed in the button but is displayed in the transaction details page on the Business Center.</p> <p>Required if the <b>item_#_productCode</b> value is NOT <code>default</code>, <code>stored_value</code>, or one of the values related to shipping and/or handling.</p> <p><b>Note</b> This value is not used for the <code>item_number</code> variable in the button; <b>paypal_item_number</b> is used for that; see the field description in this table. You may include both <b>item_#_productSKU</b> and <b>paypal_item_number</b> in the request.</p>	Regular payment	See description	String (30)
item_#_quantity	<p>Quantity of the product being purchased. The default value is 1.</p> <p>Required if the <b>item_#_productCode</b> value is NOT <code>default</code>, <code>stored_value</code>, or one of the values related to shipping and/or handling.</p> <p><b>Note</b> This value is NOT used for the <code>quantity</code> variable in the button <b>paypal_quantity</b> is used for that; see the field description in this table. This field is used to calculate the value that goes into the <code>amount</code> variable in the button code. You may include both <b>item_#_quantity</b> and <b>paypal_quantity</b> in the request.</p>	Regular payment	See description	Integer (10)

- 1 Required if any shipping information is included.
- 2 Optional, but CyberSource encourages you to send the shipping address to increase chances that the transaction will be covered under PayPal's Seller Protection Policy. See "Sending the Shipping Address for a Regular Payment Button," page 25.
- 3 Required if the **shipTo\_country** value is US or CA.

Table 4 Button Create Request Fields (Continued)

Request Field	Description	Use With Button	Required/Optional	Data Type & Length
item_#_taxAmount	<p>The sum of these values for all of the items becomes the value for the <code>tax</code> variable in the button code. This is the total tax to apply to the product. The value is NOT multiplied by <code>item_#_quantity</code>.</p> <p>This value overrides any profile-based tax you have set. See <a href="#">"Specifying Tax for a Regular Payment Button," page 27</a>, for more details.</p> <p>The <code>item_#_taxAmount</code> field is additive. For example, if you send one item with <code>unitPrice</code> of 10.00 and <code>taxAmount</code> of 0.80, and you send another item with <code>unitPrice</code> of 20.00 and <code>taxAmount</code> of 1.60, the total amount authorized will be for 32.40, not 30.00 with 2.40 of tax included.</p> <p>The <code>item_#_taxAmount</code> and the <code>item_#_unitPrice</code> must be in the same currency. The value cannot be negative.</p>	Regular payment	Optional	String (15)
item_#_unitPrice	<p>Per-item price of the product. You must include either this field or <code>purchaseTotals_grandTotalAmount</code> in your request. See the information about items and grand totals in <a href="#">Getting Started with CyberSource Essentials (PDF   HTML)</a>. This value cannot be negative.</p> <p>This field is used to calculate the value that goes into the <code>amount</code> variable in the button code.</p> <p>You can include a decimal point (.) in this field, but you cannot include any other special characters. The amount will be truncated at the request level to the correct number of decimal places.</p>	Regular payment	See description	String (15)
linkToRequest	<p>Value that links the current request to a previous authorization request for a debit card or prepaid card. This value is useful when using multiple payment methods to complete an order. For more information, see "Partial Authorizations" in <a href="#">Credit Card Services User Guide (PDF   HTML)</a>.</p>	Regular payment	Optional	String (26)

---

- 1 Required if any shipping information is included.
- 2 Optional, but CyberSource encourages you to send the shipping address to increase chances that the transaction will be covered under PayPal's Seller Protection Policy. See "Sending the Shipping Address for a Regular Payment Button," page 25.
- 3 Required if the `shipTo_country` value is US or CA.

---



Table 4 Button Create Request Fields (Continued)

Request Field	Description	Use With Button	Required/Optional	Data Type & Length
merchantID	Your CyberSource merchant ID. Use the same merchant ID for evaluation, testing, and production.	Both	Required	String (30)
merchantReferenceCode	Merchant-generated order reference or tracking number. CyberSource suggests you use a unique value for each order. See the information about tracking orders in <i>Getting Started with CyberSource Essentials</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> ).	Both	Required	String (50)
paypal_amount	CyberSource suggests that you NOT use this in your request for a regular payment button as you will already be specifying a grand total amount ( <b>purchaseTotals_grandTotalAmount</b> ) or item unit price ( <b>item_#_unitPrice</b> ), which will be used to populate PayPal's amount variable in the button code. See " <a href="#">PayPal's HTML Variables for a Regular Payment Button</a> ," page 24, for more information.	Neither	See description	N/A
paypal_cancel_return	URL of the web page shown to the customer if the customer cancels the regular PayPal payment. Example: <code>http://cancel.example.com</code> .	Regular payment	Required	String (255)
paypal_customer_email	Customer's email address, including the full domain name (for example, <code>jdoe@example.com</code> ).	Both	Optional	String (255)

1 Required if any shipping information is included.  
2 Optional, but CyberSource encourages you to send the shipping address to increase chances that the transaction will be covered under PayPal's Seller Protection Policy. See "Sending the Shipping Address for a Regular Payment Button," page 25.  
3 Required if the **shipTo\_country** value is US or CA.

Table 4 Button Create Request Fields (Continued)

Request Field	Description	Use With Button	Required/Optional	Data Type & Length
paypal_handling	<p>Do NOT use this field if you are using <b>purchaseTotals_freightAmount</b> or if you have an item with <b>item_#_productCode=handling_only</b>. CyberSource populates the <code>handling</code> variable in the button based on your values for these fields.</p> <p>If you are not using <b>purchaseTotals_freightAmount</b> or an item for handling, the <b>paypal_handling</b> value becomes the value for the <code>handling</code> variable in the button code.</p> <p>This value is a flat handling charge for the order. The value is NOT multiplied by the number of items in the order (<b>paypal_quantity</b>). The value overrides any profile-based handling charge you have set. See <a href="#">"Specifying Shipping and Handling Charges for a Regular Payment Button," page 26</a>, for more details.</p>	Regular payment	Optional	String (15)
paypal_item_name	<p>This value becomes the value for the <code>item_name</code> variable in the button code. This value is the description of the item. If the value is omitted, a field is displayed in which the customer can enter a description of the item.</p> <p><b>Note</b> Although CyberSource has a similar API field (<b>item_#_productName</b>), the <code>item_name</code> variable will NOT be populated based on CyberSource's <b>item_#_productName</b> field. You may include both <b>paypal_item_name</b> and <b>item_#_productName</b> in the request.</p>	Regular payment	Optional	String (127)
<ol style="list-style-type: none"> <li>1 Required if any shipping information is included.</li> <li>2 Optional, but CyberSource encourages you to send the shipping address to increase chances that the transaction will be covered under PayPal's Seller Protection Policy. See <a href="#">"Sending the Shipping Address for a Regular Payment Button," page 25</a>.</li> <li>3 Required if the <b>shipTo_country</b> value is US or CA.</li> </ol>				

Table 4 Button Create Request Fields (Continued)

Request Field	Description	Use With Button	Required/Optional	Data Type & Length
paypal_item_number	<p>This value becomes the value for the <code>item_number</code> variable in the button code. It is not displayed to the customer, but it is passed back to you upon completion of the payment. If omitted, it is not passed back to you.</p> <p><b>Note</b> Although CyberSource has a similar API field (<code>item_number_productSKU</code>), the <code>item_number</code> variable will NOT be populated based on CyberSource's <code>item_number_productSKU</code> field. You may include both <code>paypal_item_number</code> and <code>item_number_productSKU</code> in the request.</p>	Regular payment	Optional	String (127)
paypal_quantity	<p>This value becomes the value for the <code>quantity</code> variable in the button code. This is the quantity of items to be purchased. If omitted, the value defaults to 1 and does not show in the payment flow. Be sure to include this field if you are providing the <code>paypal_shipping2</code> field.</p> <p>Although CyberSource has a similar API field (<code>item_number_quantity</code>), the <code>quantity</code> variable in the button is NOT populated based on CyberSource's <code>item_number_quantity</code> field. Any value you pass here will appear as the <code>quantity</code> value in the button code.</p>	Regular payment	See description	Integer (no limit)
paypal_return	<p>After a customer approves a regular payment at PayPal's site, they are returned to a URL at your web site, for example: <code>http://success.example.com</code></p> <p>CyberSource suggests that you set the default URL for regular payments.</p> <p><b>Note</b> This value overrides the value you may have configured to use with PayPal's Auto Return. See "Enabling Auto Return," page 21.</p>	Regular payment	Required	String (255)

---

- 1 Required if any shipping information is included.
- 2 Optional, but CyberSource encourages you to send the shipping address to increase chances that the transaction will be covered under PayPal's Seller Protection Policy. See "Sending the Shipping Address for a Regular Payment Button," page 25.
- 3 Required if the `shipTo_country` value is US or CA.

Table 4 Button Create Request Fields (Continued)

Request Field	Description	Use With Button	Required/Optional	Data Type & Length
paypal_shipping	<p>Do NOT use this field when you are using <b>purchaseTotals_freightAmount</b> or when you have an item with <b>item_#_productCode=shipping_only</b> or <b>shipping_and_handling</b>. CyberSource populates the <code>shipping</code> variable in the button based on the values for these fields.</p> <p>If you are not using <b>purchaseTotals_freightAmount</b> or an item for shipping and handling, <b>paypal_shipping</b> becomes the value for the <code>shipping</code> variable in the button code.</p> <p>This value is a flat shipping charge for the order. The value is NOT multiplied by the number of items in the order (<b>paypal_quantity</b>). The value overrides any profile-based handling charge you have set. See <a href="#">"Specifying Shipping and Handling Charges for a Regular Payment Button," page 26</a>, for more details.</p>	Regular payment	Optional	String (15)
paypal_shipping2	<p>This value becomes the value for the <code>shipping2</code> variable in the button code. This is the cost of shipping each additional item beyond the first item. PayPal multiplies this value by the number of items in the order minus one (<b>paypal_quantity -1</b>) and then adds it to the values for the <code>shipping</code> variable and the <code>handling</code> variable in the button to give the total shipping and handling charge that they display to the customer. See <a href="#">"Specifying Shipping and Handling Charges for a Regular Payment Button," page 26</a>, for more details.</p>	Regular payment	Optional	String (15)

---

- 1 Required if any shipping information is included.
- 2 Optional, but CyberSource encourages you to send the shipping address to increase chances that the transaction will be covered under PayPal's Seller Protection Policy. See ["Sending the Shipping Address for a Regular Payment Button," page 25](#).
- 3 Required if the **shipTo\_country** value is US or CA.

---

Table 4 Button Create Request Fields (Continued)

Request Field	Description	Use With Button	Required/Optional	Data Type & Length
paypal_tax	<p>Do NOT use this field if you are using the <b>purchaseTotals_taxAmount</b> or <b>item_#_taxAmount</b> field. CyberSource populates the <code>tax</code> variable in the button based on your values for these fields.</p> <p>If you are not using the <b>purchaseTotals_taxAmount</b> or <b>item_#_taxAmount</b> field, <b>paypal_tax</b> becomes the value for the <code>tax</code> variable in the button code.</p> <p>This is a flat tax for the order. The value is NOT multiplied by the number of items in the order (<b>paypal_quantity</b>). The value overrides any profile-based tax charge you have set. See "<a href="#">Specifying Tax for a Regular Payment Button</a>," page 27, for more details.</p>	Regular payment	Optional	String (15)
paypal_undefined_quantity	If the value is set to 2, the customer can edit the quantity at PayPal's site. A quantity field will appear that they must complete. If the value is omitted or set to 0, the customer cannot edit the quantity, and a default quantity of 1 will be used.	Regular payment	Optional	Integer (1)
paypalButtonCreateService_buttonType	<p>Type of button to create. Possible values:</p> <ul style="list-style-type: none"> <li>■ <code>buy</code>: Regular payment button (PayPal's Buy Now button)</li> <li>■ <code>shopping_cart</code>: PayPal's Shopping Cart button</li> </ul> <p><b>Note</b> If you are creating a button for a regular payment, CyberSource prefers that you use the <code>buy</code> button. Instructions for creating a <code>shopping_cart</code> button are included in <a href="#">Chapter 4, "Creating a Shopping Cart Button</a>," on page 47.</p>	All	Required	String (30)
paypalButtonCreateService_run	Set this field to <code>true</code> to request <b>paypalButtonCreateService</b> .	Both	Required	String (5)
purchaseTotals_currency	This value becomes the value for the <code>currency_code</code> variable in the button code. This is the currency used for the order. PayPal currently accepts orders that use USD, CAD, EUR, GBP, or JPY only.	Regular payment	Required	String (5)
<ol style="list-style-type: none"> <li>1 Required if any shipping information is included.</li> <li>2 Optional, but CyberSource encourages you to send the shipping address to increase chances that the transaction will be covered under PayPal's Seller Protection Policy. See "<a href="#">Sending the Shipping Address for a Regular Payment Button</a>," page 25.</li> <li>3 Required if the <b>shipTo_country</b> value is US or CA.</li> </ol>				

Table 4 Button Create Request Fields (Continued)

Request Field	Description	Use With Button	Required/Optional	Data Type & Length
purchaseTotals_freightAmount	<p>This value becomes the value for the <code>shipping</code> variable in the button code. This is the total freight amount for the order. If you include this field, <b>purchaseTotals_grandTotalAmount</b> is required.</p> <p>This value overrides any profile-based shipping charge you have set. See <a href="#">"Specifying Shipping and Handling Charges for a Regular Payment Button," page 26</a>, for more details.</p>	Regular payment	Optional	String (15)
purchaseTotals_grandTotalAmount	<p>This value becomes the value for the <code>amount</code> variable in the button code. It is the grand total for the order. You must include either this field or <b>item_#_unitPrice</b> in your request. See the information about items and grand totals in <i>Getting Started with CyberSource Essentials</i> (<a href="#">PDF</a>   <a href="#">HTML</a>).</p>	Regular payment	See description	String (15)
purchaseTotals_taxAmount	<p>This value becomes the value for the <code>tax</code> variable in the button code. This is the total tax for the order. If you include this field, <b>purchaseTotals_grandTotalAmount</b> is required.</p> <p>This value overrides any profile-based tax charge you have set. See <a href="#">"Specifying Tax for a Regular Payment Button," page 27</a>, for more details.</p>	Regular payment	Optional	String (15)
shipTo_city	City to which to ship the product.	Regular payment	Optional <sup>1, 2</sup>	String (50)
shipTo_country	Country to which to ship the product. Use the two-character ISO codes. See <a href="#">ISO Standard Country Codes</a> for a list of codes.	Regular payment	Optional <sup>2</sup>	String (2)
shipTo_firstName	First name of person receiving the product.	Regular payment	Optional <sup>2</sup>	String (60)
shipTo_lastName	Last name of person receiving the product.	Regular payment	Optional <sup>2</sup>	String (60)

1 Required if any shipping information is included.

2 Optional, but CyberSource encourages you to send the shipping address to increase chances that the transaction will be covered under PayPal's Seller Protection Policy. See ["Sending the Shipping Address for a Regular Payment Button," page 25](#).

3 Required if the **shipTo\_country** value is US or CA.

Table 4 Button Create Request Fields (Continued)

Request Field	Description	Use With Button	Required/Optional	Data Type & Length
shipTo_postalCode	<p>Postal code for the shipping address. The postal code must consist of 5 to 9 digits.</p> <p>If the shipping country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] Example: 12345-6789</p> <p>If the shipping country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space] [numeric][alpha][numeric] Example: A1B 2C3</p>	Regular payment	Optional <sup>2, 3</sup>	String (10)
shipTo_shippingMethod	Shipping method for the product. For example, FEDEX.	Regular payment	Optional	String (10)
shipTo_state	State or province to which to ship the product. Use the two-character codes. See <a href="#">State, Province, and Territory Codes for the United States and Canada</a> for a list of valid codes.	Regular payment	Optional <sup>2, 3</sup>	String (2)
shipTo_street1	First line of the address to which to ship the product.	Regular payment	Optional <sup>1, 2</sup>	String (60)
shipTo_street2	Second line of the address to which to ship the product.	Regular payment	Optional <sup>2</sup>	String (60)

1 Required if any shipping information is included.

2 Optional, but CyberSource encourages you to send the shipping address to increase chances that the transaction will be covered under PayPal's Seller Protection Policy. See "Sending the Shipping Address for a Regular Payment Button," page 25.

3 Required if the **shipTo\_country** value is US or CA.

## Reply Fields

The following table describes the reply fields for creating a button. The fields you receive are the same for all types of buttons.

**Table 5 Reply Fields for Button Create**

Reply Field	Description	Data Type & Length
decision	Summarizes the result of the overall request. Possible values: <ul style="list-style-type: none"> <li>■ ACCEPT</li> <li>■ ERROR</li> <li>■ REJECT</li> </ul>	String (6)
invalidField_0...N	Fields in the request that contained invalid data. These reply fields are included as an aid to software developers only. No attempt should be made to use these fields for end user interaction. See the information about missing and invalid fields in <i>Getting Started with CyberSource Essentials</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> ).	String (100)
merchantReferenceCode	Order reference or tracking number that you provided in the request. If you included multi-byte characters in this field in the request, the returned value might contain corrupted characters.	String (50)
missingField_0...N	Required fields that were missing from the request. These reply fields are included as an aid to software developers only. No attempt should be made to use these fields for end user interaction. See the information about missing and invalid fields in <i>Getting Started with CyberSource Essentials</i> .	String (100)
paypalButtonCreateReply_buttonType	Type of button created. Possible values: <ul style="list-style-type: none"> <li>■ buy: Regular Buy Now payment button</li> <li>■ shopping_cart: Shopping Cart button. See <a href="#">Chapter 4, "Creating a Shopping Cart Button,"</a> on page 47.</li> </ul>	String (30)
paypalButtonCreateReply_encryptedFormData	Encrypted version of the button.	String (no length limit)
paypalButtonCreateReply_reasonCode	A numeric value corresponding to the result of the button creation request. See <a href="#">"Reason Codes,"</a> page 44, for a list of possible values.	Integer (5)
paypalButtonCreateReply_reconciliationID	Transaction reference number that you use to reconcile your transactions.	String (60)
paypalButtonCreateReply_requestDateTime	Time of the button creation request. The format is YYYY-MM-DDThh:mm:ssZ. For example, 2016-08-11T22:47:57Z is equal to August 11, 2016, at 22:47:57 (10:47:57 p.m.). The T separates the date and the time. The Z indicates UTC.	String (20)
paypalButtonCreateReply_unencryptedFormData	Unencrypted version of the button.	String (no length limit)



Table 5 Reply Fields for Button Create (Continued)

Reply Field	Description	Data Type & Length
reasonCode	Numeric value corresponding to the result of the overall request. See "Reason Codes," page 44, for a list of possible values.	Integer (5)
requestID	Unique request identifier, which is generated by the client.	String (26)
requestToken	Request token data created by CyberSource for each reply. The field is an encoded string that contains no confidential information such as an account or card verification number. The string can contain a maximum of 256 characters.	String (256)

## Processing a Credit

You can perform a credit for a regular payment by using **payPalCreditService**. For general information about refunding PayPal payments, see "PayPal Credits," page 13.



**Important**

You must perform the credit within 60 days of the payment request.

At this time, you can perform only one credit for an order, for either a partial amount or the full amount of the payment.

To request the service, send a request with **payPalCreditService\_run=true**. A PayPal credit is a follow-on service. It uses the **requestID** value returned from a previous **paypalButtonCreateService** request to link the credit to the payment. Send the request ID value in the **paypalCreditService\_payPalPaymentRequestID** field. CyberSource uses these values to look up the customer's billing and account information from the original payment so that you do not have to supply those fields in the **paypalCreditService** request. See Appendix A, "Examples," on page 49, for example requests and replies.

When requesting the service, do not include any other ICS services in the request.

## Request Fields

The following table lists the request fields for processing a credit.

**Table 6 PayPal Credit Request Fields**

Request Field	Description	Required / Optional	Data Type & Length
item_#_productCode	Type of product. The default value is <code>default</code> . See <a href="#">"Product Codes," page 65</a> , for a list of valid values.	Optional	String (30)
item_#_productName	Product's name.	Optional	String (30)
item_#_productSKU	Product's identifier code.	Optional	String (30)
item_#_quantity	Quantity of the product being returned.	Optional	Integer (10)
item_#_taxAmount	Total tax to apply to the product.	Optional	String (15)
item_#_unitPrice	Amount of the credit. At this time, you can perform only one credit for an order, for either a partial amount or the full amount of the payment.  You must include either this field or <b>purchaseTotals_grandTotalAmount</b> in your request. See the information about items and grand totals in <i>Getting Started with CyberSource Essentials</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> ). This value cannot be negative.	See description	String (15)
merchantID	Your CyberSource merchant ID. Use the same merchant ID for evaluation, testing, and production.	Required	String (30)
merchantReferenceCode	Merchant-generated order reference or tracking number. See the information about order tracking in <i>Getting Started with CyberSource Essentials</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> ).	Required	String (50)
orderRequestToken	The request token value returned from a previous request. This value links the previous request to the current follow-on request. This field is an encoded string that does not contain any confidential information, such as account numbers or card verification numbers. The string can contain a maximum of 256 characters.	Required	String (256)
paypalCreditService_payPalPaymentRequestID	Request ID from the payment reply.	Required	String (26)
paypalCreditService_payPalPaymentRequestToken	The <b>requestToken</b> value returned from a previous request for <b>paypalButtonCreateService</b> .  The field is an encoded string that contains no confidential information, such as an account number or card verification number. The string can contain a maximum of 256 characters.	Optional	String (256)

Table 6 PayPal Credit Request Fields (Continued)

Request Field	Description	Required / Optional	Data Type & Length
paypalCreditService_run	Set to <code>true</code> to request <b>paypalCreditService</b> .	Required	String (5)
purchaseTotals_currency	Currency used for the order. PayPal currently accepts orders that use USD, CAD, EUR, GBP, or JPY only.	Required	String (5)
purchaseTotals_grandTotalAmount	Amount of the credit. At this time, you can perform only one credit for an order, for either a partial amount or the full amount of the payment.  You must include either this field or <b>item_#_unitPrice</b> in your request. See the information about items and grand totals in <i>Getting Started with CyberSource Essentials</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> ). This value cannot be negative.	See description	String (15)

## Reply Fields

The following table lists the reply fields for processing a credit.

Table 7 PayPal Credit Reply Fields

Reply Field	Description	Data Type & Length
decision	Summarizes the result of the overall request. Possible values: <ul style="list-style-type: none"> <li>■ ACCEPT</li> <li>■ ERROR</li> <li>■ REJECT</li> </ul>	String (6)
invalidField_0...N	Fields in the request that contained invalid data. These reply fields are included as an aid to software developers only. No attempt should be made to use these fields for end user interaction. See the information about missing and invalid fields in <i>Getting Started with CyberSource Essentials</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> ).	String (100)
merchantReferenceCode	Order reference or tracking number that you provided in the request. If you included multi-byte characters in this field in the request, the returned value might contain corrupted characters.	String (50)
missingField_0...N	Required fields that were missing from the request. These reply fields are included as an aid to software developers only. No attempt should be made to use these fields for end user interaction. See the information about missing and invalid fields in <i>Getting Started with CyberSource Essentials</i> ( <a href="#">PDF</a>   <a href="#">HTML</a> ).	String (100)
paypalCreditReply_amount	Amount of the credit.	String (15)

Table 7 PayPal Credit Reply Fields (Continued)

Reply Field	Description	Data Type & Length
paypalCreditReply_reasonCode	A numeric value corresponding to the result of the PayPal credit request. See <a href="#">"Reason Codes," page 44</a> , for a list of possible values.	Integer (5)
paypalCreditReply_reconciliationID	Transaction reference number that you use to reconcile your transactions.	String (60)
paypalCreditReply_requestDateTime	Time of the PayPal credit. The format is YYYY-MM-DDThh:mm:ssZ. For example, 2016-08-11T22:47:57Z is equal to August 11, 2016, at 22:47:57 (10:47:57 p.m.). The T separates the date and the time. The Z indicates UTC.	String (20)
purchaseTotals_currency	Currency used for the order.	String (5)
reasonCode	Numeric value corresponding to the result of the overall request. See <a href="#">"Reason Codes," page 44</a> , for a list of possible values.	Integer (5)
requestID	Unique identifier for the request.	String (26)
requestToken	Request token data created by CyberSource for each reply. The field is an encoded string that contains no confidential information such as an account or card verification number. The string can contain a maximum of 256 characters.	String (256)

## Reason Codes

The following table lists the reason codes returned by the Simple Order API for the PayPal Services. See the information about handling replies in *Getting Started with CyberSource Essentials* ([PDF](#) | [HTML](#)) for a discussion of replies, decisions, and reason codes.



**Important**

Because CyberSource may add reply fields and reason codes at any time, proceed as follows:

- You should parse the reply data according to the names of the fields instead of their order in the reply. For more information on parsing reply fields, see the documentation for your client.
- Your error handler should use the **decision** field to determine the result if it receives a reason code that it does not recognize.

**Table 8 Reason Codes**

<b>Reason Code</b>	<b>Description</b>
100	Successful transaction.
101	<p>The request is missing one or more required fields.</p> <p>Possible action: See the reply fields <b>missingField_0...N</b> for which fields are missing. Resend the request with the complete information. See the information about missing and invalid fields in <i>Getting Started with CyberSource Essentials</i> (<a href="#">PDF</a>   <a href="#">HTML</a>).</p>
102	<p>One or more fields in the request contains invalid data.</p> <p>Possible action: See the reply fields <b>invalidField_0...N</b> for which fields are invalid. Resend the request with the correct information. See the information about missing and invalid fields in <i>Getting Started with CyberSource Essentials</i> (<a href="#">PDF</a>   <a href="#">HTML</a>).</p>
150	<p>Error: General system failure.</p> <p>See the documentation for your CyberSource client for information about how to handle retries in the case of system errors.</p>
151	<p>Error: The request was received but there was a server timeout. This error does not include timeouts between the client and the server.</p> <p>Possible action: To avoid duplicating the transaction, do not resend the request until you have reviewed the transaction status in the Business Center. See the documentation for your CyberSource client for information about how to handle retries in the case of system errors.</p>
152	<p>Error: The request was received, but a service did not finish running in time.</p> <p>Possible action: To avoid duplicating the transaction, do not resend the request until you have reviewed the transaction status in the Business Center. See the documentation for your CyberSource client for information about how to handle retries in the case of system errors.</p>
223	<p>A request was made to credit an order for which there is no corresponding, unused payment record. Occurs if there was not a previously successful <b>paypalButtonCreateService</b> request, or if the previously successful payment has already been used by another <b>paypalCreditService</b> request.</p> <p>Possible action: Verify that have not already credited this payment, or verify that you are crediting the correct payment.</p>
233	<p>General decline by the processor.</p> <p>Possible action: Request a different form of payment.</p>
234	<p>There is a problem with your CyberSource merchant configuration.</p> <p>Possible action: Do not resend the request. Contact Customer Support to correct the configuration problem.</p>
236	<p>Processor failure.</p> <p>Possible action: Wait a few minutes and resend the request.</p>
239	<p>The requested transaction amount must match the previous transaction amount.</p> <p>Possible action: Correct the amount and resend the request.</p>

**Table 8 Reason Codes (Continued)**

Reason Code	Description
241	The request ID is invalid. Possible action: Verify you are using the correct request ID.
250	Error: The request was received, but there was a timeout at the payment processor. Possible action: To avoid duplicating the transaction, do not resend the request until you have reviewed the transaction status in the Business Center.

## Testing

You can use CyberSource's regular testing environment for sending test transactions. If using the Simple Order API, make sure your CyberSource client is configured to send transactions to the test server. See the documentation for your client for information about how to do this.

The buttons generated by CyberSource's test system submit the form to PayPal's Sandbox test environment (<https://www.sandbox.paypal.com>). Set up your Sandbox account as soon as you begin creating your implementation. See PayPal's *Sandbox User Guide* for instructions.

Always log in to the Sandbox *before* clicking any of your test buttons. Then, when you click a test button, you automatically go to the Sandbox site, which mimics the live PayPal site.

# Creating a Shopping Cart Button

CyberSource's recommended solution is to use the regular payment button where the button type = `buy`. This is PayPal's Buy Now button, which uses an aggregate amount for the total order. However, if you want to specify information about the individual items the customer is purchasing, you can create a Shopping Cart button instead.



## Note

You should still read the information about creating a regular Buy Now button as this appendix covers only the differences between creating a Shopping Cart button and a regular Buy Now button. See [Chapter 3, "Creating Buttons,"](#) on page 24.

## To create a Shopping Cart button:

- Step 1** In your request to create the button, set the button type to `shopping_cart` instead of `buy`.
- Step 2** To add information about individual items, use the numbered item-specific fields listed below. Start the numbering with 1. See the request examples below. All of the fields are optional. See PayPal's *Merchant User Manual and Integration Guide* for more information about `on0_#` and similar fields.

<code>paypal_item_name_#</code>	<code>paypal_shipping_#</code>	<code>on0_#</code>
<code>paypal_item_number_#</code>	<code>paypal_handling_#</code>	<code>os0_#</code>
<code>paypal_quantity_#</code>	<code>paypal_tax_#</code>	<code>on1_#</code>
<code>paypal_amount_#</code>	<code>paypal_shipping2_#</code>	<code>os1_#</code>



## Note

Do not include any of CyberSource's standard API fields for items (for example, do not use `item_0_unitPrice`). Also, you do not need to provide a grand total for the offer.

- Step 3** If you want to specify cart-wide tax or handling charges, use these fields:
- **`paypal_tax_cart`**: this value overrides any item-level (`paypal_tax_#`) values or profile-based tax.
  - **`paypal_handling_cart`**: this value is added to any item-level shipping or handling charges you have specified with `paypal_shipping_#` and/or `paypal_handling_#` values.

**Step 4** Send CyberSource the request as you would for a regular payment button.

The reply you receive contains the same API reply fields as for a regular payment button.

If you have configured your CyberSource account so that you are forwarded your IPN messages, you will see separate numbered IPN variables for each item. The variables are included in the list in ["IPN Variables for Regular Payments," page 58](#).

---



# Examples

The buttons in the examples include line breaks to make it easier to see the different variables and their values. The actual buttons will not include line breaks. The encrypted buttons in the examples have been shortened for illustration. The actual length of the encrypted information is about 2000-3000 characters.

## Name-Value Pair Examples

---

### Creating a Regular Payment Button

#### Example 1 Request

---

```
paypalButtonCreateService_run=true  
paypalButtonCreateService_buttonType=buy  
merchantID=infodev  
merchantReferenceCode=482046C3A7E9XYZ  
billTo_firstName=Joe  
billTo_lastName=Smith  
billTo_street1=1040 Elm St.  
billTo_city=San Jose  
billTo_state=CA  
billTo_postalCode=95127  
billTo_country=US  
shipTo_firstName=Joe  
shipTo_lastName=Smith  
shipTo_street1=1040 Elm St.  
shipTo_city=San Jose  
shipTo_state=CA  
shipTo_postalCode=95127  
shipTo_country=US  
purchaseTotals_grandTotalAmount=25.99  
purchaseTotals_taxAmount=2.55  
purchaseTotals_freightAmount=4.95  
purchaseTotals_currency=USD  
paypal_cancel_return=http://paypalcancel.example.com  
paypal_return=http://paypalsuccess.example.com  
paypal_item_name=Nouveau Lamp  
paypal_item_number=3362710
```

---

**Example 2 Reply**


---

```

requestID=0305782650000167905080
merchantReferenceCode=482046C3A7E9XYZ
decision=ACCEPT
reasonCode=100
paypalButtonCreateReply_reasonCode=100
paypalButtonCreateReply_buttonType=buy
paypalButtonCreateReply_amount=33.49
purchaseTotals_currency=USD
paypalButtonCreateReply_requestDateTime=2005-04-27T18:49:55Z
paypalButtonCreateReply_reconconciliationID=RYXWMQX04MC9
paypalButtonCreateReply_unencryptedFormData=
<form action="https://www.paypal.com/cgi-bin/webscr" method="post">
<input type="image" src="https://https://www.paypal.com/en_US/i/btn/x-click-
but23.gif" border="0" name="submit">
<input type="hidden" name="cmd" value="_s-xclick">
<input type="hidden" name="business" value="a.person@example.com">
<input type="hidden" name="first_name" value="Joe">
<input type="hidden" name="Smith" value="Smith">
<input type="hidden" name="address1" value="1040 Elm St">
<input type="hidden" name="city" value="San Jose">
<input type="hidden" name="state" value="CA">
<input type="hidden" name="zip" value="95127">
<input type="hidden" name="amount" value="25.99">
<input type="hidden" name="tax" value="2.55">
<input type="hidden" name="handling" value="0.00">
<input type="hidden" name="shipping" value="4.95">
<input type="hidden" name="item_number" value="3362710">
<input type="hidden" name="cancel_return" value="http://paypalcancel.example.com">
<input type="hidden" name="undefined_quantity" value="0">
<input type="hidden" name="quantity" value="0">
<input type="hidden" name="return" value="http://paypalsuccess.example.com">
<input type="hidden" name="item_name" value="Nouveau Lamp">
<input type="hidden" name="shipping2" value="0.00">
<input type="hidden" name="currency_code" value="USD">
<input type="hidden" name="bn" value="CyberSource">
<input type="hidden" name="notify_url" value="http://example.com/ipn">
<input type="hidden" name="invoice" value="RYXWMQX04MC9">
<input type="hidden" name="custom"
value="RYXWMQX04MC9,0305782650000167905080,482046C3A7E9XYZ"></
form>paypalButtonCreateReply_encryptedFormData=
<form action="https://www.paypal.com/cgi-bin/webscr" method="post">
<input type="image" src="https://https://www.paypal.com/en_US/i/btn/x-click-
but23.gif" border="0" name="submit">
<input type="hidden" name="cmd" value="_s-xclick">
<input type="hidden" name="encrypted" value=
"-----BEGIN PKCS7-----
MIIGTQYJKoZIhvcNAQcDoIIIGPjCCBjocCAQAxggE6MIIBNgIBADCBnjCBmDELMAkGA1UEBhMCVVMxEzARBgNVB
AgTCKNhbg1mb3JuaWEExETAPBgNVBACTCFhbiBkbn3N1MRUwEwYDSIb3DQEBAQUABIGAg0SFsADkAz5103qK8w
e8z3zt86F9IZB8q8J+oCSjmbWgrZdh+VKHgPL2SKuRGrifwXDCGFOJonjYK5EKEExeSCmR/eZRUwzIpUmnKAY/
r7Hqzd/e1Is1JuFZ9/iKQO2hK/wRq5VYIL22MGn0fY8GZ6CBmM76ceYojOe/
Xm1pUOLjANQnx2MVMi85hhpMAcaM
-----END PKCS7-----"></form>

```

---

## Processing a Credit

### Example 3 Request

---

```
paypalCreditService_run=true  
merchantID=infodev  
merchantReferenceCode=482046C3A7E94F3  
paypalCreditService_payPalPaymentRequestID=0305782650000167905052  
purchaseTotals_currency=USD  
purchaseTotals_grandTotalAmount=10.00
```

---

### Example 4 Reply

---

```
requestID=0305782650000167943227  
merchantReferenceCode=482046C3A7E94F5  
decision=ACCEPT  
reasonCode=100  
paypalCreditReply_reasonCode=100  
paypalCreditReply_requestDateTime=2005-06-19T18:49:55Z  
paypalCreditReply_reconconciliationID=RXX9483QX04WC4  
paypalCreditReply_amount=10.00  
purchaseTotals_currency=USD
```

---

## Creating a Shopping Cart Button

### Example 5 Request

---

```
paypalButtonCreateService_run=true
paypalButtonCreateService_buttonType=shopping_cart
merchantID=infodev
merchantReferenceCode=482046C3A7E94F5
paypal_cancel_return=http://paypalcancel.example.com
paypal_return=http://paypalsuccess.example.com
paypal_item_name_1=Book
paypal_item_number_1=999999
paypal_amount_1=25.95
paypal_quantity_1=1
paypal_shipping_1=3.95
paypal_shipping2_1=0.00
paypal_handling_1=0.00
paypal_tax_1=0.00
paypal_item_name_2=DVD
paypal_item_number_2=777777
paypal_amount_2=18.95
paypal_quantity_2=1
paypal_shipping_2=0.00
paypal_shipping2_2=0.00
paypal_handling_2=0.00
paypal_tax_2=0.00
// Include the API fields for the billing
// and shipping information here
```

---

# XML Examples

---

## Creating a Regular Payment Button

### Example 6 Request

---

```
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.23">
  <merchantID>infodev</merchantID>
  <merchantReferenceCode>482046C3A7E94F5</merchantReferenceCode>
  <billTo>
    <firstName>Joe</firstName>
    <lastName>Smith</lastName>
    <street1>1040 Elm St.</street1>
    <city>San Jose</city>
    <state>CA</state>
    <postalCode>95127</postalCode>
    <country>US</country>
  </billTo>
  <shipTo>
    <firstName>Joe</firstName>
    <lastName>Smith</lastName>
    <street1>1040 Elm St.</street1>
    <city>San Jose</city>
    <state>CA</state>
    <postalCode>95127</postalCode>
    <country>US</country>
  </shipTo>
  <purchaseTotals>
    <currency>USD</currency>
    <taxAmount>2.55</taxAmount>
    <grandTotalAmount>25.99</grandTotalAmount>
    <freightAmount>4.95</freightAmount>
  </purchaseTotals>
  <paypal>
    <cancel_return>http://paypalcancel.example.com</cancel_return>
    <return>http://paypalsuccess.example.com</return>
    <item_name>Nouveau Lamp</item_name>
    <item_number>3362710</item_number>
  </paypal>
  <paypalButtonCreateService run="true">
    <buttonType>buy</buttonType>
  </paypalButtonCreateService>
</requestMessage>
```

---

**Example 7 Reply**


---

```

<c:replyMessage xmlns:c="urn:schemas-cybersource-com:transaction-data-1.23">
  <c:merchantReferenceCode>482046C3A7E94F5
  </c:merchantReferenceCode>
  <c:requestID>0305782650000167905080</c:requestID>
  <c:decision>ACCEPT</c:decision>
  <c:reasonCode>100</c:reasonCode>
  <c:purchaseTotals>
    <c:currency>USD</c:currency>
  </c:purchaseTotals>
  <c:paypalButtonCreateReply>
    <c:reasonCode>100</c:reasonCode>
    <c:encryptedFormData>
<form action="https://www.paypal.com/cgi-bin/webscr" method="post">
<input type="image" src="https://https://www.paypal.com/en_US/i/btn/x-click-
but23.gif" border="0" name="submit">
<input type="hidden" name="cmd" value="_s-xclick">
<input type="hidden" name="encrypted" value=
"-----BEGIN PKCS7-----
MIIGTQYJKoZIhvcNAQcDoIIIGPjCCBjOCAAQxggE6MIIBNgIBADCBnjCBmDELMAkGA1UEBhMCVVMxExZARBgNVB
AgTCkNhbgGmb3JuaWExETAPBgNVBACTCFNhbiBKb3NlMRUwEwYDSIb3DQEBAQUABIGAg0SFsADkAz5l03qK8w
e8z3zt86F9IZB8q8J+oCSjmBWgrZdh+VKHgPL2SKuRGrifwXDCGFOJonjYK5EKEExeSCmR/eZRUwzIpUmnKAY/
r7Hqzd/e1IslJuFZ9/iKQO2hK/wRq5VYIL22MGn0fY8GZ6CBmM76ceYojOe/
XmlpUOLjANQnx2MVMi85hhpMAcaM
-----END PKCS7-----"></form>
    </c:encryptedFormData>
    <c:unencryptedFormData>
<form action="https://www.paypal.com/cgi-bin/webscr" method="post">
<input type="image" src="https://https://www.paypal.com/en_US/i/btn/x-click-
but23.gif" border="0" name="submit">
<input type="hidden" name="cmd" value="_s-xclick">
<input type="hidden" name="business" value="a.person@example.com">
<input type="hidden" name="first_name" value="Joe">
<input type="hidden" name="Smith" value="Smith">
<input type="hidden" name="address1" value="1040 Elm St">
<input type="hidden" name="city" value="San Jose">
<input type="hidden" name="state" value="CA">
<input type="hidden" name="zip" value="95127">
<input type="hidden" name="amount" value="25.99">
<input type="hidden" name="tax" value="2.55">
<input type="hidden" name="handling" value="0.00">
<input type="hidden" name="shipping" value="4.95">
<input type="hidden" name="item_number" value="3362710">
<input type="hidden" name="cancel_return" value="http://paypalcancel.example.com">
<input type="hidden" name="undefined_quantity" value="0">
<input type="hidden" name="quantity" value="0">
<input type="hidden" name="return" value="http://paypalsuccess.example.com">
<input type="hidden" name="item_name" value="Nouveau Lamp">
<input type="hidden" name="shipping2" value="0.00">
<input type="hidden" name="currency_code" value="USD">
<input type="hidden" name="bn" value="CyberSource">
<input type="hidden" name="notify_url" value="http://example.com/ipn">

```

---

**Example 7    Reply (Continued)**


---

```

<input type="hidden" name="invoice" value="RYXWMQX04MC9">
<input type="hidden" name="custom"
value="RYXWMQX04MC9,0305782650000167905080,482046C3A7E94F5"></form>
  </c:unencryptedFormData>
  <c:requestDateTime>=2005-04-27T18:49:55Z</c:requestDateTime>
  <c:reconciliationID>RYXWMQX04MC9</c:reconciliationID>
  <c:buttonType>buy</c:buttonType>
</c:paypalButtonCreateReply>
</c:replyMessage>

```

---

## Processing a Credit

**Example 8    Request**


---

```

<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.37">
  <merchantID>infodev</merchantID>
  <merchantReferenceCode>482046C3A7E94F3</merchantReferenceCode>
  <purchaseTotals>
    <currency>USD</currency>
    <grandTotalAmount>10.00</grandTotalAmount>
  </purchaseTotals>
  <paypalCreditService run="true">
    <paypalPaymentRequestID>0305782650000167905052</paypalPaymentRequestID>
  </paypalCreditService>
</requestMessage>

```

---

**Example 9    Reply**


---

```

<c:replyMessage xmlns:c="urn:schemas-cybersource-com:transaction-data-1.37">
  <c:merchantReferenceCode>482046C3A7E94F3
</c:merchantReferenceCode>
  <c:requestID>0305782650000167943227</c:requestID>
  <c:decision>ACCEPT</c:decision>
  <c:reasonCode>100</c:reasonCode>
  <purchaseTotals>
    <c:currency>USD</c:currency>
  </c:purchaseTotals>
  <c:paypalCreditReply>
    <c:reasonCode>100</c:reasonCode>
    <c:amount>10.00</c:amount>
    <c:requestDateTime>2005-06-19T18:49:55Z</c:requestDateTime>
    <c:reconciliationID>RYX9483QX04WC4</c:reconciliationID>
  </c:paypalCreditReply>
</c:replyMessage>

```

---

## Creating a Shopping Cart Button

### Example 10 Request

---

```

<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.23">
  <merchantID>infodev</merchantID>
  <merchantReferenceCode>482046C3A7E94F5</merchantReferenceCode>
  <billTo>
    <!-- fill in billing information here -->
  </billTo>
  <shipTo>
    <!-- fill in shipping information here -->
  </shipTo>
  <purchaseTotals>
    <currency>USD</currency>
  </purchaseTotals>
  <paypal>
    <item_name_1>Book</item_name_1>
    <item_number_1>999999</item_number_1>
    <amount_1>25.95</amount_1>
    <quantity_1>1</quantity_1>
    <shipping_1>3.95</shipping_1>
    <shipping2_1>0.00</shipping2_1>
    <handling_1>0.00</handling_1>
    <tax_1>0.00</tax_1>
    <item_name_2>DVD</item_name_2>
    <item_number_2>777777</item_number_2>
    <amount_2>18.95</amount_2>
    <quantity_2>1</quantity_2>
    <shipping_2>0.00</shipping_2>
    <shipping2_2>0.00</shipping2_2>
    <handling_2>0.00</handling_2>
    <tax_2>0.00</tax_2>
  </paypal>
  <paypalButtonCreateService run="true">
    <buttonType>shopping_cart</buttonType>
  </paypalButtonCreateService>
</requestMessage>

```

---



# PayPal Reply Variables

## PDT Reply Variables

If you are using Payment Data Transfer, you receive these variables from PayPal in a POST request when you create a regular payment button. See ["Information from PayPal: Payment Data Transfer \(PDT\)," page 14](#), for more information.

**Table 9** PayPal's PDT Reply Variables

Variable	Description
tx	Transaction ID/Payment Data Transfer token. You can use the token to receive additional transaction information from PayPal. For more information, see PayPal's <i>Merchant User Manual and Integration Guide</i> .
st	Status variable indicating whether the payment was successful and whether you can ship the goods. Possible values: <ul style="list-style-type: none"> <li>■ Completed: Payment is complete.</li> <li>■ Denied: You denied the payment.</li> <li>■ Failed: Payment failed. Occurs only when the payment comes from the customer's bank account.</li> <li>■ Pending: Payment is pending.</li> </ul>
amt	Total amount of the payment.
cc	Currency code.
cm	During the button creation, CyberSource populates this field with various identifiers, and PayPal repeats the field in the PDT reply. The field contains three identifiers separated by commas. The three identifiers are the <b>paypalButtonCreateReply_reconciliationID</b> from CyberSource's reply, the <b>requestID</b> from CyberSource's reply, and the <b>merchantReferenceCode</b> that you provided in the request.
sig	PayPal's signature.

# IPN Variables for Regular Payments

---

IPN messages contain only alphanumeric characters. Unless otherwise specified, the maximum field length for each IPN variable returned is 127 characters. Special characters are translated into URL encoding format. See [Table 10, page 59](#). For example, the colon (:) in `http://` is translated to `%3A` in the IPN message. For example, an IPN message looks like this (line breaks have been added for clarity):

---

```

status=Completed&
address_zip=47405&
mc_shipping=0.00&
mc_handling=0.00&
first_name=Larry&
mc_fee=1.49&
address_name=Larry+Smith&
notify_version=1.6&
custom=0000015593%2C1036035196510167905065&
payer_status=verified&
business=jdoe%40companyABC.com&
address_country=United+States&
num_cart_items=1&
mc_handling1=0.00&
address_city=bloomington&
payer_email=lsmith%40customer.com&
verify_sign=A0SZ-01CLAWJfjd5.kpi9BJKjYluAIQAZfebUT8pdPM2vJIhPr9AHE-i&
mc_shipping1=0.00&
tax1=0.00&
txn_id=1LM18508KU470513M&
payment_type=instant&
last_name=Smith&
receiver_email=jdoe%companyABC.com&
item_name1=Book&
address_state=IN&
payment_fee=1.49&
quantity1=1&
receiver_id=8CZZHSZRQUHUA&t
xn_type=cart&
mc_currency=USD&
mc_gross_1=41.00&
test_ipn=1&
payment_gross=41.00

```

---

Table 10 IPN Variables for Regular Payments

Variable	Description	Max Length
address_city	City of customer's street address.	40
address_country	Country of customer's address.	64
address_name	Name used with address (included when the customer provides a gift address).	128
address_state	State of customer's address.	40
address_status	Whether the address is confirmed. Possible values: <ul style="list-style-type: none"> <li>■ confirmed: Customer provided a confirmed address</li> <li>■ unconfirmed: Customer provided an unconfirmed address</li> </ul>	
address_street	Customer's street address.	200
address_zip	Postal code of customer's address.	20
business	Merchant's email address or account ID. Equivalent to receiver_email if payment is sent to primary account and a copy of the business variable that was passed to PayPal in the button.	127
custom	CyberSource populates this field with various identifiers, and PayPal repeats the field in the IPN message. The field contains six identifiers separated by commas.  The first three identifiers are the <b>paypalButtonCreateReply_reconciliationID</b> from CyberSource's reply, the <b>requestID</b> from CyberSource's reply, and the <b>merchantReferenceCode</b> that you provided in the request.  The last three identifiers are CyberSource internal tracking values.	255
exchange_rate	Exchange rate used if a currency conversion occurred.	
first_name	Customer's first name.	64
invoice	CyberSource populates this field with an identifier, and PayPal repeats the field in the IPN message.  The identifier in CyberSource's reply is <b>paypalButtonCreateReply_reconciliationID</b> .	255
item_name and item_name#	Item name passed by you or entered by the customer (if not passed by you). If this is a shopping cart transaction, PayPal appends the number of the item (item_name1, and so on).	127
item_number and item_number#	Pass-through variable for you to track purchases that is passed back to you at completion of payment. Not returned if not included in the button.	127
last_name	Customer's last name.	64

Table 10 IPN Variables for Regular Payments (Continued)

Variable	Description	Max Length
mc_currency	Currency of the payment. The value will be USD, CAD, EUR, GBP, or JPY.	
mc_fee	Transaction fee for the payment. The mc_gross minus mc_fee will equal the amount deposited into the receiver_email account. Equivalent to payment_fee for USD payments. If this amount is negative, it indicates a refund or reversal, and the refund or reversal can be for the full or partial amount of the original transaction.	
mc_gross and mc_gross_#	Full amount of the customer's payment before transaction fee is subtracted. Equivalent to payment_gross for USD payments. If this amount is negative, it indicates a refund or reversal, and the refund or reversal can be for the full or partial amount of the original transaction.  For a shopping cart transaction, PayPal appends the number of the item (mc_gross_1, and so on). The sum of all the mc_gross_# values should total mc_gross.	
mc_handling and mc_handling#	Total handling amount associated with the transaction.  For a shopping cart transaction, PayPal appends the number of the item (mc_handling1, and so on).  For a shopping cart transaction, the handling_cart cart-wide variable is also included in the mc_handling variable; for this reason, the sum of the mc_handling# values may not be equal to mc_handling.	
mc_shipping and mc_shipping#	Total shipping amount associated with the transaction.  For a shopping cart transaction, this is the combined total of the <b>paypal_shipping</b> and <b>paypal_shipping2</b> API fields that you pass to CyberSource, where # is the number of the item. The mc_shipping# is only returned when you apply a shipping amount for a specific item. Because profile shipping may apply, the sum of the mc_shipping# values may not equal mc_shipping.	
notify_version	Version of the IPN message. Example: 1.6	
num_cart_items	For a shopping cart transaction, number of items in the cart.	
option_name1 and option_name1_#	Option 1 name as requested by you.  For a shopping cart transaction, PayPal appends the number of the item (option_name1_1, and so on).	64
option_name2 and option_name2_#	Option 2 name as requested by you.  For a shopping cart transaction, PayPal appends the number of the item (option_name2_1, and so on).	64
option_selection1 and option_selection1_#	Option 1 choice as entered by the customer.  For a shopping cart transaction, PayPal appends the number of the item (option_selection1_1, and so on).	200

**Table 10 IPN Variables for Regular Payments (Continued)**

<b>Variable</b>	<b>Description</b>	<b>Max Length</b>
option_selection2 and option_selection2_#	Option 2 choice as entered by the customer.  For a shopping cart transaction, PayPal appends the number of the item (option_selection2_1, and so on).	200
parent_txn_id	In the case of a refund, reversal, or canceled reversal, this variable contains the txn_id of the original transaction while txn_id contains a new ID for the new transaction. See the description of txn_id in this table.	17
payer_business_name	Customer's company name.	127
payer_email	Customer's primary email address. Use this email to provide any credits.	127
payer_id	PayPal's unique customer ID.	13
payer_status	Whether the customer has a verified account. Possible values: <ul style="list-style-type: none"> <li>■ Verified: Customer has a Verified PayPal account</li> <li>■ Unverified: Customer has an Unverified PayPal account</li> </ul>	
payment_date	PayPal's time stamp. Example: 18:30:30 Jan 1, 2000 PST.	
payment_fee	USD transaction fee for the payment. The payment_gross minus payment_fee will equal the amount deposited into the receiver_email account. Will be empty for non-USD payments. This is a legacy field replaced by mc_fee. If this amount is negative, it indicates a refund or reversal, and the refund or reversal can be for the full or partial amount of the original transaction.	
payment_gross	Full USD amount of the customer's payment before the transaction fee is subtracted. Will be empty for non-USD payments. This is a legacy field replaced by mc_gross. If this amount is negative, it indicates a refund or reversal, and the refund or reversal can be for the full or partial amount of the original transaction.	

**Table 10 IPN Variables for Regular Payments (Continued)**

Variable	Description	Max Length
payment_status	<p>Status of the payment. Possible values:</p> <ul style="list-style-type: none"> <li>■ <b>Canceled-Reversal:</b> Reversal has been canceled. For example, you won a dispute with the customer, and the funds for the reversed transaction have been returned to you.</li> <li>■ <b>Completed:</b> If referring to an initial purchase, this means the payment has been completed and the funds have successfully been added to your account balance.</li> <li>■ <b>Denied:</b> You denied the payment. This happens only if the payment was previously pending due to one of the reasons specified by the <code>pending_reason</code> variable. See below.</li> <li>■ <b>Failed:</b> Payment has failed. This happens only if the payment was attempted from the customer's bank account.</li> <li>■ <b>Pending:</b> See the <code>pending_reason</code> variable for the reason why the payment is pending. You will receive another IPN when the status changes to <code>Completed</code>, <code>Failed</code>, or <code>Denied</code>.</li> <li>■ <b>Refunded:</b> You refunded the payment.</li> <li>■ <b>Reversed:</b> Payment was reversed due to a chargeback or other type of reversal. The funds have been debited from your account balanced and returned to the customer. Look for the reason for the reversal in the <code>reason_code</code> variable. See below.</li> </ul>	
payment_type	<p>Indicates whether the payment is instant or delayed. Possible values:</p> <ul style="list-style-type: none"> <li>■ <b>echeck:</b> Electronic check</li> <li>■ <b>instant:</b> Credit card, PayPal balance, or Instant Transfer</li> </ul>	

Table 10 IPN Variables for Regular Payments (Continued)

Variable	Description	Max Length
<code>pending_reason</code>	Reason if <code>payment_status=Pending</code> . Possible values: <ul style="list-style-type: none"> <li>■ <code>address</code>: Customer did not include a confirmed shipping address, and you have your Payment Receiving Preferences set to manually accept or deny each of these payments.</li> <li>■ <code>echeck</code>: Electronic check has not cleared yet.</li> <li>■ <code>intl</code>: You hold a non-U.S. account and do not have a withdrawal method. You must manually accept or deny this payment from your PayPal Account Overview.</li> <li>■ <code>multi-currency</code>: You do not have a balance in the currency sent, and you do not have your Payment Receiving Preferences set to automatically convert and accept the payment. You must manually accept or deny the payment.</li> <li>■ <code>other</code>: Payment is pending for a reason other than the other reasons listed here. Contact PayPal Customer Service.</li> <li>■ <code>unilateral</code>: The payment was made to an email address that is not yet registered or confirmed.</li> <li>■ <code>upgrade</code>: Payment was made via credit card and you must upgrade your account to Business or Premier status to receive the funds. You could also get this status because you have reached the monthly limit for transactions on your account.</li> <li>■ <code>verify</code>: You are not yet verified. You must verify your account before you can accept the payment.</li> </ul>	
<code>quantity</code> and <code>quantity#</code>	Quantity passed by you or entered by the customer (if not passed by you). For a shopping cart transaction, PayPal appends the number of the item ( <code>quantity1</code> , and so on).	127
<code>reason_code</code>	Reason for a refund or reversal. This field is returned only if <code>payment_status=Reversed</code> or <code>Refunded</code> . Possible values: <ul style="list-style-type: none"> <li>■ <code>buyer_complaint</code>: A reversal has occurred because of a complaint from your customer about the transaction.</li> <li>■ <code>chargeback</code>: A reversal has occurred because of a chargeback by the customer.</li> <li>■ <code>guarantee</code>: A reversal has occurred because the customer triggered a money-back guarantee.</li> <li>■ <code>refund</code>: A reversal has occurred because you have given the customer a refund.</li> <li>■ <code>other</code>: A reversal has occurred for a reason other than those stated above.</li> </ul>	
<code>receiver_email</code>	Merchant's primary email address. If the payment is sent to a non-primary email address on your PayPal account, the <code>receiver_email</code> will still be your primary email.	127

**Table 10 IPN Variables for Regular Payments (Continued)**

<b>Variable</b>	<b>Description</b>	<b>Max Length</b>
<code>receiver_id</code>	Merchant's unique account ID (same as the referral ID).	13
<code>settle_amount</code>	Amount deposited into the account's primary balance after a currency conversion either by automatic conversion (through your Payment Receiving Preferences) or manual conversion (through manually accepting a payment).	
<code>settle_currency</code>	Currency of <code>settle_amount</code> .	
<code>tax</code> and <code>tax#</code>	Amount of tax charged on the payment.  For a shopping cart transaction, PayPal appends the number of the item ( <code>tax1</code> , and so on). The <code>tax#</code> is included only if there was a specific tax amount applied to a particular shopping cart item. Because profile-based tax may apply to other items in the cart, the sum of <code>tax#</code> might not total to <code>tax</code> .	
<code>txn_id</code>	PayPal's unique transaction ID.	17
<code>txn_type</code>	Type of transaction. Possible values: <ul style="list-style-type: none"> <li>■ <code>cart</code>: Payment was sent by the customer via the PayPal Shopping Cart.</li> <li>■ <code>send_money</code>: Payment was sent by your customer from the PayPal web site using the <b>Send Money</b> tab.</li> <li>■ <code>web_accept</code>: Payment was sent by your customer via Buy Now buttons, Donations, or Smart Logos.</li> </ul>	
<code>verify_sign</code>	Encrypted string used to validate the authenticity of the transaction.	



# Product Codes

This table lists the values that you can use for the product code. Use the **item\_#\_productCode** request field to specify the product code.

**Table 11 Product Codes**

Product Code	Definition
adult_content	Adult content.
coupon	Coupon applied to the entire order.
default	Default value for the product code. CyberSource uses <code>default</code> when a request message does not include a value for the product code.
electronic_good	Electronic product other than software.
electronic_software	Software distributed electronically rather than on disks or other media.
gift_certificate	Gift certificate.
handling_only	Fee that you charge your customer to cover your administrative selling costs.
service	Service that you perform for your customer.
shipping_and_handling	The shipping portion is the charge for shipping the product to your customer. The handling portion is the fee you charge your customer to cover your administrative selling costs.
shipping_only	Charge for transporting tangible personal property from your location to your customer. You must maintain documentation that clearly establishes the location where the title to the property passed from you to your customer.
subscription	Subscription to a web site or other content.

# Index

## A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

### A

account configuration  
 CyberSource [22](#)  
 PayPal [19](#)  
 API access [21](#)  
 Auto Return  
 success URL [21](#)

### B

business [25](#)  
 business account [10](#)  
 button creation [24](#)  
 shopping cart [47](#)  
 Buy Now buttons. See regular payments  
 Buyer Complaint Process [18](#)

### C

cancel URL [22](#)  
 Capture Detail Report [17](#)  
 chargebacks [18](#)  
 cmd [25](#)  
 configuring your account  
 CyberSource [22](#)  
 PayPal [19](#)  
 confirmed address [18](#)  
 cookies, enabling [23](#)  
 creating buttons [24](#)  
 shopping carts [47](#)  
 credit card statement name [20](#)

credits [41](#)  
 described [13](#)  
 currencies, using multiple [22](#)  
 custom [25](#)  
 CyberSource reports [16](#)

### D

date and time format [40](#)

### E

electronic checks [19](#)  
 email notifications  
 disabling [19](#)  
 enabling [21](#)  
 encrypted button [28](#)  
 examples [49](#)

### F

fulfilling orders [15](#)  
 funding sources [10](#)

### G

GMT [40](#)

## A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

### I

invoice [25](#)

#### IPN

- described [15](#)
- message forwarding [22](#)
- notification URL [20](#)
- variables [58](#)

### M

multiple currencies [22](#)

### N

notify\_url [25](#)

### O

order fulfillment [15](#)

order tracking [14](#)

### P

Payment Data Transfer. See PDT

Payment Events Report [16](#)

PayPal Account, opening and configuring [19](#)

PayPal business account [10](#)

paypal\_business [25](#)

paypalButtonCreateService [24](#)

paypal\_cancel\_return [22](#)

paypal\_cmd [25](#)

paypalCreditService [41](#)

paypal\_custom [25](#)

paypal\_invoice [25](#)

paypal\_notify\_url [25](#)

#### PDT [29](#)

- Auto Return [14](#)
- described [14](#)
- reply variables [57](#)

POST from PayPal [29](#)

product codes [65](#)

### R

reason codes [44](#)

reconciliation IDs [14](#)

reconciliation with settlement file [22](#)

refunds [41](#)

described [13](#)

regular payments

described [10](#)

IPN events [16](#)

IPN variables [58](#)

shipping address [25](#)

shipping and handling [26](#)

specifying tax [27](#)

variables in the button [24](#)

reports [16](#)

request IDs [14](#)

and credits [41](#)

### S

sample code [49](#)

sandbox [46](#)

Security Center [18](#)

Seller Protection Plan [18](#)

settlement file [22](#)

shipping address [25](#)

collecting [23](#)

shipping and handling [26](#)

shipping goods [15](#)

shopping cart button [47](#)

signing up

CyberSource [22](#)

PayPal [19](#)

success URL [11](#)

**A B C D E F G H I J K L M N O P Q R S T U V W X Y Z**

**T**

tax [27](#)

testing [46](#)

time format [40](#)

tx token [57](#)

**U**

unencrypted button [28](#)

UTC [40](#)