PAYPAL PAYMENTS INTEGRATION GUIDE

A Summary of the essential points

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Contents

Official GitHub Repo

This official [repository](#) contains samples implementations of the PayPal IPN validation for several languages:

- C#
- ASP
- AWS
- Coldfusion
- JavaScript
- PERL
- PHP
- Python
- Ruby
- Visual Basic

IPN Validation Process

PayPal Instant Payment Notification is a call back system that will get initiated once a transaction is completed (e.g. when an express checkout completed successfully).

1. Your application submits a transaction to PayPal. The client performs the checkout.

2. Your application will receive the transaction-related IPN variables on the IPN URL that you have specified in your request. If you don't specify it, it will default to the IPN URL set in your PayPal account.

3. Your application must send these IPN variables back to PayPal servers for verification. Upon verification, PayPal will send a response string with "VERIFIED" or "INVALID".

4. If your application fails to respond with a successful HTTP response (200), PayPal will resend this IPN either until a success is received or up to 16 times.

5. If your application consistently fails to respond, your IPN may be disabled, in which case you will receive a notification on your primary PayPal email address.

Source: https://developer.paypal.com/api/nvp-soap/paypal-payments-standard/integration-guide/Appx-websitestandard-htmlvariables/

Transaction Submissions Variables

The following sections describe the possible values for the submission variables.

Technical Variables

These variables control how PayPal responds to the initiated transactions.

cmd (Required)

Value	Description
_xclick	For use then the person clicked a ***Buy Now*** button.
_cart	For use with shopping cart purchases. The following variables specify the kind of shopping cart button that the person clicked: 1. **add** – ***Add to Cart*** buttons for the PayPal Shopping Cart. 2. **display** – ***View Cart*** buttons for the PayPal Shopping Cart. 3. **upload** – The ***Cart Upload*** command for third-party cars.
_xclick-subscriptions	For use when the button that the person clicked was a ***Subscribe*** button.
_xclick-auto-billing	For use when the button that the person clicked was an ***Automatic Billing*** button.
_donations	For use when the button that the person clicked was a ***Donate*** button.
_s-xclick	For use when the button that the person clicked was protected from tampering by using encryption, or the button was saved in the merchant's PayPal account. PayPal determines which kind of button was clicked by decoding the encrypted code or by looking up the saved button in the merchant's account.

Variables for special PayPal features

The following variables are used to signal PayPal how to behave on specific conditions.

Name	Req / Rec / Optional	Description
notify_url	Recommended	The URL to which PayPal posts information about the payment, in the form of Instant Payment Notification (IPN) messages. Max: 255 characters
hosted_button_id	Required for buttons that have been saved in the PayPal account.	The ID of the button that was saved in a merchant's PayPal account. PayPal assigns the value when payment buttons are first created and saved in merchants' PayPal accounts. There is a maximum of 1,000 saved buttons per account.
bn	Optional	An identifier of the source that built the code for the button that the buyer clicked. Sometimes known as the *build notation*. Specify a value using the following format: Company_Service_Product_Country Substitute <Service> with an appropriate value, like: 1. BuyNow (deprecated check docs) 2. AddToCart 3. Subscribe 4. AutomaticBilling 5. ShoppingCart Substitute <Product> with WPS always for PayPal Payments Standard payment buttons and for the PayPal Payments Standard Cart Upload command. Substitute <Country> with an appropriate two-letter country code from codes defined by the [ISO 3166-1](#) standard. For example, a Buy Now button on a website that you coded yourself might have the following line of code: Bn="DesignerFotos_BuyNow_WPS_US"

Individual Item Variables

These individual item variables specify information about a product or service for Buy Now and Add to Cart buttons, or they specify information about a contribution for Donate buttons.

Name	Req / Rec / Optional	Description
amount	Required for Add to Cart buttons. Optional for Buy Now and Donate buttons. Not used with Subscribe buttons.	The price or amount of the product, service, or contribution, not including shipping, handling, or tax. If you omit this variable from Buy Now or Donate buttons, buyers enter their own amount at the time of payment.
discount_amount	Valid only for Buy Now and Add to Cart buttons.	Discount amount associated with an item, which must be less than the selling price of the item. If you specify **discount_amount** and **discount_amount2** is not defined, this flat amount is applied regardless of the quantity of items purchased.
discount_amount2	Valid only for Buy Now and Add to Cart buttons.	Discount amount associated with each additional quantity of the item, which must be equal to or less than the selling price of the item. For **discount_amount2** to take effect, you must also specify a **discount_amount** that is greater than or equal to 0.
discount_rate	Valid only for Buy Now and Add to Cart buttons.	Discount rate, as a percentage, associated with an item. Set to a value < 100. If you do not set **discount_rate2**, the value in **discount_rate** applies only to the first item regardless of the quantity of items purchased.
discount_rate2	Valid only for Buy Now and Add to Cart buttons.	Discount rate, as a percentage, associated with each additional quantity of the item. Must be <= 100. For **discount_rate2** to take effect, you must also specify a **discount_rate** that is greater than or equal to 0.

discount_num	Valid only for Buy Now and Add to Cart buttons.	Number of additional quantities of the item to which the discount applies. Applicable when you specify **discount_amount2** or **discount_rate2**. Specifies an upper limit on the number of discounted items.
item_name	Recommended Optional for Buy Now, Donate, Subscribe, Automatic Billing, and Add to Cart buttons.	Description of item. If you omit this variable, buyers enter their own name during checkout. Character length: 127
item_number	Required if you want PayPal to track either inventory or profit and loss for the item the button sells.	Pass-through variable for you to track product or service purchased or the contribution made. The value you specify is passed back to you upon payment completion. Character length: 127
quantity	Optional	Number of items. If profile-based shipping rates are configured with a basis of quantity, the sum of quantity values is used to calculate the shipping charges for the payment. PayPal appends a sequence number to uniquely identify the item in the PayPal Shopping Cart. For example, quantity1, quantity2, and so on. Value must be > 0.
shipping	Optional This shipping variable is valid only for Buy Now and Add to Cart buttons.	The cost of shipping this item. If you specify **shipping** and **shipping2** is not defined, this flat amount is charged regardless of the quantity of items purchased. By default, if profile-based shipping rates are configured, buyers are charged an amount according to the shipping methods they choose.
shipping2	This shipping variable is valid only for	The cost of shipping each additional unit of this item.

	Buy Now and Add to Cart buttons.	If you omit this variable and profile-based shipping rates are configured, buyers are charged an amount according to the shipping methods they choose.
tax	Valid only for Buy Now and Add to Cart buttons.	Transaction-based tax override variable. Set this variable to a flat tax amount to apply to the payment regardless of the buyer's location. This value overrides any tax settings set in your account profile. By default, profile tax settings, if any, apply.
tax_rate	Valid only for Buy Now and Add to Cart buttons.	Transaction-based tax override variable. Set this variable to a percentage that applies to the amount multiplied by the quantity selected during checkout. This value overrides any tax settings set in your account profile. A valid value is from 0.001 to 100. By default, profile tax settings, if any, apply. Character length: 6
undefined_quantity	Optional for Buy Now buttons. Not used with other buttons.	Enables buyers to specify the quantity. For example, 1. Character length: 1
weight	Optional	Weight of items. If profile-based shipping rates are configured with a basis of weight, the sum of weight values is used to calculate the shipping charges for the payment. A valid value is a decimal number with two significant digits to the right of the decimal point.
weight_unit	Optional	The unit of measure if weight is specified. Valid value is lbs or kgs. Default is lbs.
on0	Optional for Buy Now, Add to Cart, Subscribe, and	First option field name and label.

	Automatic Billing buttons. Not used with Donate buttons.	The os0 variable contains the corresponding value for this option field. For example, if on0 is size, os0 could be large. Character length: 64
on1	Optional for Buy Now, Add to Cart, Subscribe, and Automatic Billing buttons. Not used with Donate buttons.	Second option field name and label. The os1 variable contains the corresponding value for this option field. For example, if on1 is color then os1 could be blue. You can specify a maximum of 7 option field names (6 with Subscribe buttons) by incrementing the option name index (on0 through on6). Character length: 64
os0	Optional for Buy Now, Add to Cart, Subscribe, and Automatic Billing buttons. Not used with Donate buttons.	Option selection of the buyer for the first option field, on0. If the option field is a dropdown menu or a set of radio buttons, each valid value is no more than 64 characters. If buyers enter this value in a text field, the maximum value is 200 characters long. **Note:** The option field on0 must also be defined. For example, it could be size. For priced options, include the price and currency symbol in the text of the option selections: \<option value="small">small - $10.00\</option> Add a corresponding *option_select0* and *option_amount0* variable for each priced option. Priced options are supported only for Buy Now and Add to Cart buttons. Only one dropdown menu option selection can have priced options. Character length: 64 or 200, see above
os1	Optional for Buy Now, Add to Cart, Subscribe, and	Option selection of the buyer for the second option field, on1.

	Automatic Billing buttons. Not used with Donate buttons.	If the option field is a dropdown menu or a set of radio buttons, each valid value is no more than 64 characters. If buyers enter this value in a text field, the maximum value is 200 characters long. You can specify a maximum of seven option selections (6 with Subscribe buttons) by incrementing the option selection index (*os0* through *os6*). You can implement up to five option selections as dropdown menus and up to two option selections as test boxes. Character length: 64 or 200, see above
option_index	Optional for Buy Now, Add to Cart, Subscribe, and Automatic Billing, buttons. Not used with Donate buttons.	The cardinal number of the option field, *on0* through *on9*, that has product options with different prices for each option. Include *option_index* if the option field with prices is not *on0*. Default is 0.
option_select0	Optional for Buy Now, Add to Cart, Subscribe, and Automatic Billing buttons. Not used with Donate buttons.	For priced options, the value of the first option selection of the *on0* dropdown menu. The values must match exactly: <option value="">small - $10.00</option> ... <input type="hidden" name="option_select0" value=""> Character length: 64
option_amount0	Optional for Buy Now, Add to Cart, Subscribe, and Automatic Billing buttons. Not used with Donate buttons.	For priced options, the amount that you want to charge for the first option selection of the *on0* dropdown menu. Use only numeric values; the currency is taken from the *currency_code* variable. For example: <option value="small">small - $... <input type="hidden" name="option_amount0"</option> value="10.00"> Character length: 64
option_select1	Optional for Buy Now, Add to Cart, Subscribe, and Automatic Billing buttons.	For priced options, the value of the second option selection of the *on0* dropdown menu. For example: <option value="">small - $10.00</option> ... <input type="hidden" name="option_select" value="">

		You can specify a maximum of 10 option selections by incrementing the option selection index (*option_select0* through *option_select9*). **Note:** You must also set a corresponding *os0* option selection. Character length: 64
option_amount1	Optional for Buy Now, Add to Cart, Subscribe, and Automatic Billing buttons. Not used with Donate buttons.	For priced options, the amount that you want to charge for the second option selection of the on0 dropdown menu. For example: <option value="small">medium - $</option> ... <input type="hidden" name="option_amount1" value="">` You can specify a maximum of 10 option amounts by incrementing the option amount index (*option_amount0* through *option_amount9*). **Note:** You must also set a corresponding os0 option selection. Character length: 64

Payment Transaction Variables

These variables provide information about entire payments, regardless of the individual items involved with the payment. You can use these variables with Add to Cart buttons and the Cart Upload command.

Name	Req / Rec / Optional	Description
address_override	Optional	1 The address specified with automatic fill-in variables overrides the PayPal member's stored address. Buyers see the addresses that you pass in, but they cannot edit them. PayPal does not show addresses if they are invalid or omitted. For more information, see the Auto-fill PayPal checkout page variables. Character Length: 1
currency_code	Optional	The currency of the payment. Default is USD. For valid values, see Currencies Supported by PayPal. Character Length: 3
custom	Optional	Pass-through variable for your own tracking purposes, which buyers do not see. By default, no variable is passed back to you. Character Length: 256
handling	Optional	Handling charges. This variable is not quantity-specific. The same handling cost applies, regardless of the number of items on the order. By default, no handling charges are included.
invoice	Optional	Pass-through variable you can use to identify your invoice number for this purchase.

		By default, no variable is passed back to you. Character Length: 127
tax_cart	Optional	Cart-wide tax, overriding any individual item *tax_x* value.
weight_cart	Optional	If profile-based shipping rates are configured with a basis of weight, PayPal uses this value to calculate the shipping charges for the payment. This value overrides the weight values of individual items. A valid value is a decimal number with two significant digits to the right of the decimal point.
weight_unit	Optional	The unit of measure if weight_cart is specified. Valid value is lbs or kgs. Default is lbs.

Shopping Cart Variables

These variables are to be used with Add to Cart buttons and third-party shopping carts or custom carts that initiate payment processing with the Cart Upload command.

It is recommended to not pass more than 25 items in a single transaction.

Name	Req / Rec / Optional	Description
add	See Description	Add an item to the PayPal Shopping Cart. Set this variable, as follows: add="1" Alternatively, use the display="1" variable, which displays the contents of the PayPal Shopping Cart to the buyer. If you specify both **add** and **display**, **display** takes precedence. Character Length: 1
amount_x	Required	The amount associated with item *x*. To pass an aggregate amount for the entire cart, use **amount_1**. Applies only to the Cart Upload command.
business	Required	Your PayPal ID or an email address associated with your PayPal account. Email addresses must be confirmed.
discount_amount_cart	Optional	Single discount amount charged cart-wide. It must be less than the selling price of all items combined in the cart. This variable overrides any individual item **discount_amount_x** values, if present. Applies only to the Cart Upload command. **Note:** Not applicable if using individual tax amounts **tax_x**.
discount_amount_x	Optional	The discount amount associated with item *x*. It must be less than the selling price of the associated item.

| | | This amount is added to any other item discounts in the cart.

Applies only to the Cart Upload command. |
|---|---|---|
| **discount_rate_cart** | Optional | Single Discount rate, as a percentage, to be charged cart-wide.

Set to a value less than 100. The variable overrides any individual item *discount_rate_x* values, if present.

Applies only to the Cart Upload command.

Note: Not applicable if using individual tax amounts **tax_x**. |
| **discount_rate_x** | Optional | The discount rate associated with item *x*.

Set to a value less than 100. The variable takes into account all quantities of item *x*.

Applies only to the Cart Upload command. |
| **display** | See Description | Display the contents of the PayPal Shopping Cart to the buyer. This variable must be set as follows:

display="1"

The alternative is the add="1" variable, which adds an item to the PayPal Shopping Cart.

If both *add* and *display* are specified, *display* takes precedence.

Character Length: 1 |
| **handling_cart** | Optional | Single handling fee charged cart-wide.

If *handling_cart* is used in multiple Add to Cart buttons, the *handling_cart* value of the first item is used. |
| **item_name_x** | Required | The name associated with item *x*.

To pass an aggregate name for the entire cart, use *item_name_1*.

Applies only to the Cart Upload command. |
| **paymentaction** | Optional | Indicates whether the payment is a final sale or an authorization for a final sale, to be captured later.

Valid value is *sale*, *authorization*, or *order*. |

		Default is sale.
		To place a hold on the PayPal account for the authorized amount, set this value to authorization. To authorize the payment without placing a hold on the PayPal account, set this value to order.
		Important: If you set *paymentaction* to order, use the Authorization & Capture API to authorize and capture payments. The Merchant Services on the PayPal website let you capture payments only for authorizations but not for orders.
quantity_x	Optional	The quantity associated with item *x* that is uploaded from a shopping cart. To pass an aggregate quantity for the entire cart, use *quantity_1*.
shopping_url	Optional	The URL of the page on the merchant website that buyers go to when they click the Continue Shopping button on the PayPal Shopping Cart page. For more information see [Continue shopping on current the merchant web page]().
upload	See Description	Upload the contents of a third-party shopping cart or a custom shopping cart. Set this variable as follows: upload="1" Alternatively, use the *add="1"* variable and the *display="1"* variables with the PayPal Shopping Cart. Character Length: 1

Recurring Payment Variables

These variables set the terms for different PayPal automatic payment plans. Recurring payment buttons are:

1. Subscribe
2. Automatic Billing

Subscribe Variables

Name	Req / Rec / Optional	Description
business	Required	Your PayPal ID or an email address associated with your PayPal account. Email addresses must be confirmed.
item_name	Optional	Description of item being sold. If you are collecting aggregate payments, the value can be a summary of all items purchased, a tracking number, or a generic term such as, subscription. If you omit this variable, buyers see a field in which they can enter the item name. Character Length: 127
currency_code	Optional	The currency of prices for trial periods and the subscription. Default is USD. For valid values, see [Currencies Supported by PayPal](#). Character Length: 3
a1	Optional	Trial period 1 price. For a free trial period, specify 0.
p1	See Description	Trial period 1 duration. Required if you specify a1. Specify an integer value in the valid range for the units of duration that you specify with t1. Character Length: 2

t1	Required if you specify a1	Trial period 1 units of duration. Valid value is: • D. Days. Valid range for p1 is 1 to 90. • W. Weeks. Valid range for p1 is 1 to 52. • M. Months. Valid range for p1 is 1 to 24. • Y. Years. Valid range for p1 is 1 to 5. Character Length: 1
a2	Optional	Trial period 2 price. Can be specified only if you also specify a1.
p2	See Description	Trial period 2 duration. Required if you specify a2. Specify an integer value in the valid range for the units of duration that you specify with t2. Character Length: 2
t2	See Description	Trial period 2 units of duration. Valid value is: • D. Days. Valid range for p2 is 1 to 90. • W. Weeks. Valid range for p2 is 1 to 52. • M. Months. Valid range for p2 is 1 to 24. • Y. Years. Valid range for p2 is 1 to 5. Character Length: 1
a3	Required	Regular subscription price.
p3	Required	Subscription duration. Specify an integer value in the Valid range for the units of duration that you specify with t3. Character Length: 2
t3	Required	Regular subscription units of duration. Valid value is: • D. Days. Valid range for p3 is 1 to 90. • W. Weeks. Valid range for p3 is 1 to 52. • M. Months. Valid range for p3 is 1 to 24. • Y. Years. Valid range for p3 is 1 to 5. Character Length: 1
src	Optional	Recurring payments.

		Subscription payments recur unless subscribers cancel their subscriptions before the end of the current billing cycle or you limit the number of times that payments recur with the value that you specify for *srt*. Valid value is: • 0. Subscription payments do not recur. • 1. Subscription payments recur. Default is 0. Character Length: 1
srt	Optional	Recurring times. Number of times that subscription payments recur. Specify an integer with a minimum value of 2 and a maximum value of 52. Valid only if you specify src="1". Character Length: 1
sra	Optional	Reattempt on failure. If a recurring payment fails, PayPal attempts to collect the payment two more times before canceling the subscription. Valid value is: • 0. Do not reattempt failed recurring payments. • 1. Reattempt failed recurring payments before canceling. Default is 1. For more information, see [Reattempting Failed Recurring Payments with Subscribe Buttons](#). Character Length: 1
no_note	Required	Do not prompt buyers to include a note with their payments. Valid value is from Subscribe buttons: • 1. Hide the text box and the prompt. For Subscribe buttons, always set no_note to 1. Character Length: 1
custom	Optional	User-defined field which PayPal passes through the system and returns to you in your merchant payment notification email. Subscribers do not see this field.

		Character Length: 255
invoice	Optional	User-defined field which must be unique with each subscription.
		The invoice number is shown to subscribers with the other details of their payments.
		Character Length: 127

Automatic Billing Variables

Name	Req / Rec / Optional	Description
set_customer_limit	Required	Specify whether to let buyers enter maximum billing limits in a text box or choose from a list of maximum billing limits that you specify.
		Valid value is:
		• max_limit_own. your button displays a text box for buyers to enter their own maximums above a minimum billing limit that you set with the min_amount variable.
		• max_limit_defined. your button displays a dropdown menu of product options with prices to let buyers choose their maximum billing limits.
min_amount	Optional	The minimum monthly billing limit, if you have one.
		Valid only if **set_customer_limit = max_limit_own**.

PayPal Checkout Page Variables

These variables control how PayPal checkout pages appear and function.

Name	Req / Rec / Optional	Description
image_url	Optional	The URL of the 150x50-pixel image displayed as your logo in the upper left corner of the PayPal checkout pages. Default is your business name, if you have a PayPal Business account or your email address, if you have PayPal Premier or Personal account. Character Length: 1,024
lc	Optional	The locale of the checkout login or sign-up page. PayPal provides localized checkout pages for some countries and languages. For more information about locale codes and a list of supported locales, see the PayPal locale codes reference page. Character Length: 5
no_shipping	Optional	Do not prompt buyers for a shipping address. Valid value is: • 0. Prompt for an address, but do not require one. • 1. Do not prompt for an address. • 2. Prompt for an address and require one. Default is 0. Character Length: 1
return	Optional	The URL to which PayPal redirects buyers' browser after they complete their payments. For example, specify a URL on your site that displays a thank you for your payment page. By default, PayPal redirects the browser to a PayPal webpage. Character Length: 1,024
rm	Optional	Return method. The **FORM METHOD** used to send data to the URL specified by the **return** variable. Valid value is: • 0. All shopping cart payments use the GET method.

		• 1. The buyer's browser is redirected to the return URL by using the GET method, but no payment variables are included. • 2. The buyer's browser is redirected to the return URL by using the POST method, and all payment variables are included. Default is 0. **Note:** The *rm* variable takes effect only if the *return* variable is set. Character Length: 1
cancel_return	Optional	A URL to which PayPal redirects the buyers' browsers if they cancel checkout before completing their payments. For example, specify a URL on your website that displays the Payment Canceled page. By default, PayPal redirects the browser to a PayPal webpage. Character Length: 1,024

Auto-fill PayPal Checkout Page Variables

Variables to fill PayPal checkout pages automatically. Allows you to specify information about buyers. PayPal recommends that you include automatic fill-out variables with all of your payment buttons for consistent address handling in the checkout experience of your buyers.

Note: When you pass in **_address_override=1_** or tax or shipping variables, PayPal displays the values in the payment widget. Also, PayPal hides the calculation widget, regardless of setting up shipping and tax rates in your Account Profile.

Name	Req / Rec / Optional	Description
address1	Optional	Street (1 of 2 fields) Character Length: 100
address2	Optional	Street (2 of 2 fields) Character Length: 100
city	Optional	City Character Length: 40
country	Optional	Sets shipping and billing country. For valid values, see Country and Region Codes. Character Length: 2
email	Optional	Email address Character Length: 127
first_name	Optional	First name Character Length: 32
last_name	Optional	Last name Character Length: 32
lc	Optional	Sets the language for the billing information/log-in page only. Default is US. For valid values, see Countries and Regions Supported by PayPal. Character Length: 2
charset	Optional	Sets the character set and character encoding for the billing information/log-in page on the PayPal website. In addition, this variable sets the same values for information that you send to PayPal in your HTML button code. Default is based on the language encoding settings in your account profile.

		For valid values, see Setting the Character Set — charset.
night_phone_a	Optional	The area code for U.S. phone numbers, or the country code for phone numbers outside the U.S. PayPal fills in the buyer's home phone number automatically. see above
night_phone_b	Optional	The three-digit prefix for U.S. phone numbers, or the entire phone number for phone numbers outside the U.S., excluding country code. PayPal fills in the buyer's home phone number automatically. see above
night_phone_c	Optional	The four-digit phone number for U.S. phone numbers. PayPal fills in the buyer's home phone number automatically. see above
state	Optional	U.S. state. For valid values, see PayPal state and province codes. Character Length: 2
zip	Optional	Postal code. Character Length: 32

Instant Update API Variables

Set up the Cart Upload command for the Instant Update API callback. Establish your own Instant Update callback server before you use these variables. HTML variables for the Instant Update API set up the Cart Upload command for the Instant Update API callback. Establish your own Instant Update callback server before you use these variables.

Set up a payment for the Instant Update API

Some Instant Update variables set up the Cart Upload to use your callback server. Include the following required variables in the Cart Upload command to have PayPal send Instant Update requests to your callback server. Include the following optional variables when appropriate.

Name	Description
callback_urlRequired	The URL of your Instant Update callback serverCharacter Length: 1024
callback_timeoutRequired	The timeout in seconds for callback responses from your Instant Update callback server. After exceeding the timeout, PayPal uses the fallback values on the Review Your Payment page for tax, shipping, and insurance.
	Valid value is from 1 through 6. PayPal recommends the value 3.
	Important: Use values other than 3 only when instructed to do so by your PayPal representative.
	Character Length: 1
callback_versionRequired	The version of the Instant Update API that your callback server uses.
fallback_tax_amountOptional	Tax amount to use as a fallback, if the callback response times out
fallback_shipping_option_name_xRequired	Name and label of shipping option x to use as a fallback, if the callback response times out. For example, "Express 2 days". You can include a maximum of 10 shipping options as fallbacks. Substitute x with ordinal numbers, starting with 0.
	Include one instance of this variable, with its index (x) set to 0. If you include just one instance, include fallback_shipping_option_is_default_x parameter with its index, x, set to 0 and its value set to 1.

Name	Description
	A valid value for x is from 0 to 9. Character Length: 50
fallback_shipping_option_amount_xRequired	Shipping amount for option x to use as a fallback, if the response times out. Valid value for x is from 0 to 9.
fallback_shipping_option_is_default_xRequired	Indicates that shipping option x is the default and should be selected in the dropdown menu as a fallback, if the response times out. Only one shipping option can be the default for buyers. Check that you set one instance only of fallback_shipping_option_is_default_x to 1. Valid value is: • 1. Shipping option x is the default shipping option. • 0. Shipping option x is not the default shipping option. Valid value for x is from 0 to 9. Character Length: 1
fallback_insurance_option_offeredOptional	Indicates that insurance is offered and consumers can opt in to the insurance during checkout. PayPal ignores this variable if you omit fallback_insurance_amount or its value is less than or equal to 0. Valid value is: • 1. Insurance is offered and consumers can opt in to during checkout. • 0. Insurance is applied along with the transaction, if applicable. The consumer will NOT have a choice to remove the insurance from the transaction amount. Character Length: 1

Name	Description
fallback_insurance_amountOptional	Insurance amount to use as a fallback, if the callback response times out. Include the fallback_insurance_option_offered HTML variable if you specify an insurance amount. The fallback insurance amount applies to all shipping options that you specify.

Instant update variables for dimensions of individual items

Shipping charges are calculated sometimes by using the dimensions of individual items in the shopping cart. Include the following optional dimensional variables below in the Cart Upload command to provide the information to your callback server.

HTML variables for instant update payment for dimension-based shipping charges	
Name	Description
height_*x*Optional	Height of item *x* in the shopping cart. A valid value is a positive integer.
height_unitOptional	Unit of measure for the values specified by the height_*x* values. A valid value is any value that you choose. PayPal passes the value to your callback server in callback requests.
width_*x*Optional	Width of item *x* in the shopping cart. A valid value is a positive integer.
width_unitOptional	Unit of measure for the value specified by width_*x*. A valid value is any value that you choose. PayPal passes the value to your callback server in callback requests.
length_*x*Optional	Length of item *x* in the shopping cart. Valid value is a positive integer.
length_unit Optional	Unit of measure for the value specified by length_*x*. Valid value is any value that you choose. PayPal passes the value to your callback server in callback requests.

Deprecated Variables

The following variables have been deprecated. They are ignored when you pass them to PayPal.

Name	Description	Deprecation date
cbtOptional	Sets the text for the Return to Merchant button on the PayPal Payment Complete page. For Business accounts, the return button displays your business name in place of *Merchant*, by default. By default, the text readsReturn to donations coordinator for Donate buttons. **Note:** The cbt variable takes effect only if the return variable is set. Character Length: 60	Dec. 2016
cnOptional	Related to the no_note variable. When no_note is 0, a text box is displayed at checkout for buyers who would like to include any special instructions. Use the cn field to enter a custom note or label for this text box, such as, Enter any special instructions:.Character Length: 40	Sept. 2016
cpp_cart_border_colorOptional	The HTML hex code for your principal identifying color. PayPal blends your color to white in a gradient fill that borders the cart review area of the PayPal checkout user interface. Valid value is 6 single-byte hexadecimal characters that represent an HTML hex code for a color. - Valid only for Buy Now and Add to Cart buttons and the Cart Upload command. - Not used with Subscribe or Donate buttons. Character Length: 6	Sept. 2016

Name	Description	Deprecation date
cpp_header_imageOptional	The image at the top left of the checkout page. The image's maximum size is 750 pixels wide by 90 pixels high. PayPal recommends that you provide an image that is stored only on a secure (https) server.	Sept. 2016
	For more information, see [Customize PayPal Checkout Pages](#) in the Merchant Setup and Administration Guide.	
	Deprecated for Buy Now and Add to Cart buttons and the Cart Upload command.	
	Character Length: No limit	
cpp_headerback_colorOptional	The background color for the header of the checkout page.	Sept. 2016
	Valid value is case-insensitive six-character, HTML hexadecimal color code in ASCII.	
	Deprecated for Buy Now and Add to Cart buttons and the Cart Upload command.	
	Character Length: 6	
cpp_headerborder_colorOptional	The border color around the header of the checkout page. The border is a 2-pixel perimeter around the header space, which has a maximum size of 750 pixels wide by 90 pixels high.	Sept. 2016
	Valid value is case-insensitive six-character, HTML hexadecimal color code in ASCII.	
	Deprecated for Buy Now and Add to Cart buttons and the Cart Upload command.	
	Character Length: 6	
cpp_logo_imageOptional	A URL to your logo image. Use a valid graphics format, such as .gif, .jpg, or .png. Limit the image to 190 pixels wide by 60 pixels high. PayPal crops images that are larger. PayPal places your logo image at the top of the cart review area.	Sept. 2016
	Note: PayPal recommends that you store the image on a secure (https) server. Otherwise, web	

Name	Description	Deprecation date
	browsers display a message that checkout pages contain non-secure items.	
	Valid value is 127 single-byte alphanumeric characters.	
	• Valid only for Buy Now and Add to Cart buttons and the Cart Upload command.	
	• Not used with Subscribe or Donate buttons.	
	Character Length: 127	
cpp_payflow_colorOptional	The background color for the checkout page below the header. Valid value is case-insensitive six-character, HTML hexadecimal color code in ASCII.	Sept. 2016
	Note: Background colors that conflict with PayPal's error messages are not allowed; in these cases, the default color is white.	
	Deprecated for Buy Now and Add to Cart buttons and the Cart Upload command.	
	Character Length: 6	
max_textOptional	A description of the automatic billing plan. The Create a PayPal payment button page uses the same value that you enter in the Description field. Your button passes the description to PayPal to augment the item name in authorization notices and transaction details. If you write the HTML code for your button manually, the value of max_text and the text above the button can differ.	Sept. 2016
modifyOptional	Modification behavior.	March 15, 2019 for modify=1 and modify=2
	Valid value is:	
	• 0. Default. Enables subscribers only to sign up for new subscriptions.	
	• 1. Enables subscribers to sign up for new subscriptions and modify their current subscriptions.	

Name	Description	Deprecation date
	• 2. Enables subscribers to modify only their current subscriptions. **Deprecation behavior**: The modify values 1 and 2 are deprecated. If your customer clicks an existing modify subscription button that uses a modify value of 1 or 2, PayPal returns the following message: Things don't appear to be working at the moment. Please try again later. Update your code to use modify=0, the only valid value, which allows your customers to sign up for new subscriptions only. Character Length: 1	
no_noteOptional	Do not prompt buyers to include a note with their payments. Valid value is: • 0. Provide a text box and prompt for the note. • 1. Hide the text box and the prompt. Default is 0. To add a text label for the text box, such as, Enter any special instructions:, use the cn variable. Character Length: 1	Sept. 2016
page_styleOptional	The custom payment page style for checkout pages. Valid value is: • paypal. use the PayPal page style • primary. use the page style that you marked as primary in your account profile • page_style_name. use the custom payment page style from your account profile that has the specified name Default is primary if you added a custom payment page style to your account profile. Otherwise, Default is paypal.	Sept. 2016

Name	Description	Deprecation date
	Character Length: 30	
_oe-gift-certificateOptional	The button that the person clicked was a Buy Gift Certificate button.	Feb. 1, 2017
usr_manageOptional	Set to 1 to have PayPal generate usernames and initial passwords for subscribers.	March 15, 2019
	For more information, see Generate Subscriber User Names and Passwords.	
	Character Length: 1	