



- [PayPal Home](#)
- [Support](#)
- Search PayPal Developer Central

Search

- [Developer Home](#)
- [Partner Solutions](#)
- [How to](#)
- [Library](#)
- [Training](#)
- [Community](#)
  
- [Integration Overview](#)
- [HTML](#)
  - [Overview](#)
  - [Website Payments Standard](#)
  - [Payflow Link](#)
  - [IPN and PDT Variables](#)
  - [Standard Variable Reference](#)
- [API](#)
  - [Summary](#)
  - [Express Checkout](#)
  - [Digital Goods For Express Checkout](#)
  - [Website Payments Pro](#)
  - [Adaptive Payments](#)
  - [Mass Payment](#)
  - [Button Manager](#)
  - [Payflow Pro](#)
  - [Website Payments Pro Payflow Edition](#)
  - [API Endpoints](#)
  - [Go Live Checklist](#)
  - [API Reference](#)
- [Administration / Back Office](#)
  - [Overview](#)
  - [Setup and Administration](#)
  - [Refunds](#)
  - [Authorization & Capture](#)
  - [Virtual Terminal](#)
  - [Fraud Management Filters](#)
  - [Instant Payment Notification](#)
  - [Reporting](#)
  - [Recurring Payments](#)
- [Testing](#)
  - [PayPal Sandbox](#)
  - [Using the Sandbox](#)
  - [Sign up](#)
  - [Log In](#)

- [Sandbox Forum](#)
- [Product Availability](#)
  - [Overview](#)
- [Developer Home](#) >
- [How to](#) >
- [API](#) >
- [Button Manager](#) >
- Overview
- Updated on December 7, 2010

## API

- [Summary](#)
- [Express Checkout](#)
- [Digital Goods For Express Checkout](#)
- [Website Payments Pro](#)
- [Adaptive Payments](#)
- [Mass Payment](#)
- [Button Manager](#)
  - [Overview](#)
  - [Examples](#)
- [Payflow Pro](#)
- [Website Payments Pro Payflow Edition](#)
- [API Endpoints](#)
- [Go Live Checklist](#)
- [API Reference](#)
  
- Other Links
- [Sample Code](#)
- [Documentation](#)
- [API Reference](#)
- [Testing – Sandbox](#)
- International
- [Canada](#)
- [United Kingdom](#)

# Button Manager API Overview

The Button Manager API lets you programatically create, manage, edit, and delete Website Payment Standard buttons, which are the same kind of buttons that you can create from the PayPal Profile. Hosted buttons created by this API reside on PayPal and can use all features, including inventory management; however, you can use this API to create code for non-hosted Website Payment Standard buttons and Hosted Solution links and buttons as well.

- [Button Manager Introduction](#)
- [Generated Button Code](#)
- [Button Hosting](#)

- [Hosted Button Manipulation](#)
- [Inventory Management Using Hosted Buttons](#)
- [Inventory Management for Digital Downloads](#)
- [Button Manager API Summary](#)
- [Hosted Solution Links](#)
- [Granting Third-Party Permission for APIs](#)
- [Specifying HTML Variables](#)

## Button Manager Introduction

You should consider creating and managing your buttons with the Button Manager API when you are creating more than just a few Website Payment Standard buttons or when you manage buttons for others; for example, if you provide a shopping cart for merchants.

The Button Manager API enables you to manage Website Payment Standard buttons programmatically in the same way that you can manage them on PayPal from the My Saved Buttons page of your Profile.

Note:

You can access your My Saved Buttons page on PayPal by choosing My Saved Buttons from the Profile's Selling Preferences column. If no buttons exist, the menu item is Create New Button.

You can use the API to create these Website Payment Standard and Hosted Solution buttons:

- Buy Now
- Add to Cart and View Cart
- Donate
- Buy Gift Certificate
- Subscribe and Unsubscribe
- Pay Now (Hosted Solution only)
- Installment Plan
- Automatic Billing

The following buttons are some of those that you can create using the Button Manager API:





## Generated Button Code

When you create a button, PayPal responds by generating code that you can paste into your web page or document.

The generated code includes:

- HTML code for including the button in web pages
- URL link code for adding buttons to email and documents that support links

Note:

Not all merchants in every country can use all the buttons that can be created. For example, German merchants cannot use Subscribe buttons even though they can be created through the API. If you can create the button for the specified country using [Create PayPal payment button](#) on PayPal, your merchant will be able to use the button.

This example shows the PayPal code for displaying a hosted Add to Cart button to sell a wireless mouse:

```
<form target="paypal" action="https://www.sandbox.paypal.com/cgi-bin/webscr" method="post">
<input type="hidden" name="cmd" value="_s-xclick">
<input type="hidden" name="hosted_button_id" value="19218">
<table>
<tr><td><input type="hidden" name="on0" value="Color">Color</td></tr><tr><td><select
  <option value="Red">Red $10.00
  <option value="Blue">Blue $8.00
  <option value="Green">Green $12.00
</select> </td></tr>
<tr><td><input type="hidden" name="on1" value="Size">Size</td></tr><tr><td><select name="on1"
  <option value="Small">Small
  <option value="Large">Large
</select> </td></tr>
</table>
<input type="hidden" name="currency_code" value="USD">
```

```
<input type="image" src="https://www.sandbox.paypal.com/en_US/i/btn/btn_cart_LG.gif"

```

When you display a web page with this code, this button appears:



PayPal-generated code for a link would be as follows:

```
https://www.sandbox.paypal.com/cgi-bin/webscr?cmd=_s-xclick&hosted_button_id=19218
```

For a link, PayPal does not generate code for options.

## Button Hosting

The Button Manager API can create four kinds of buttons: hosted, encrypted, clear text, and token buttons. Buttons that you can view on the My Saved Buttons page of your PayPal profile are called *hosted* buttons.

- **Hosted buttons** are stored on PayPal. The parameters associated with this kind of button are secure.

Hosted buttons provide the greatest flexibility because you can instruct PayPal to change them dynamically, and PayPal maintains information about their state, such as the inventory level associated with the button.

Note:

You cannot use hosted buttons with Hosted Sole Solution; you should use token buttons instead.

- **Encrypted buttons** are not stored on PayPal. The parameters associated with this kind of button are encrypted.

Encrypted buttons are similar to hosted buttons with regard to secure operation; however, you must update the web pages that use an encrypted button each time the button or its associated information changes. You should use an encrypted button only if a hosted button cannot be used.

- **Clear text buttons** are not stored on PayPal. The parameters associated with this kind of button are not encrypted.

Clear text buttons are not hosted and are not encrypted. They can be used dynamically because you can change the value of a parameter “on the fly.” However, if you use them, recognize the

risk that sensitive information can be altered or stolen.

- **Token buttons** are not stored on PayPal. They are only used with Hosted Solution and the parameters associated with this kind of button are secure.

Token buttons are dynamic and initiate the Hosted Solution checkout flow. They have a lifetime of approximately 2 hours if not used.

## Hosted Button Manipulation

When you create a hosted button, the response includes an ID that allows you to manipulate the button using the Button Manager API. Do not confuse a hosted button with a button used as part of Hosted Solution, which is a product that supports token, encrypted, and cleartext buttons.

With hosted buttons, you can:

- Get a list of all hosted buttons, which lets you identify buttons for further programmatic manipulation
- Get details about a hosted button, which lets you to identify the parameters and values associated with a button
- Update a hosted button, which lets you to change individual parameters, such as price, in a hosted button
- Manage hosted button status; currently, you can only delete a button
- Get and set inventory information associated with the button

## Inventory Management Using Hosted Buttons

You can get or set the inventory level for the item associated with a hosted button. You can also track inventory on options within an item, such as color or size.

If you enable inventory management for a button, PayPal tracks inventory for you and also lets your buyer know if the item is sold out. You can specify inventory tracking on an item-by-item basis, and also by option, such as color or size, within the item.

An e-mail alerts you if inventory falls below the threshold you specify. If an item is sold out, you can specify whether or not to accept a payment anyway. Optionally, you can specify a URL where your buyer's browser is redirected if the item is sold out.

You can also enable profit and loss tracking for an item or option associated with a button. If you enable this feature, you must provide the cost of the item or option. PayPal then calculates your gross profit, which is the selling price of the item less the specified cost.

## Inventory Management for Digital Downloads

If you use hosted buttons, you can chose to specify a list of download keys, which are keys that you define and are associated with the item being sold. These keys are useful when you want to sell digital goods with a key to enable access.

To use this feature, you set the inventory for the button to include one or more download keys, up to a maximum of 1,000 keys. These keys are then available when you get the inventory for a button.

For example, when a customer orders software or music, you could obtain an unused key from the list of download keys and email it to your customer so they can download the item. You are responsible for choosing the appropriate key from the list and how it is used. PayPal only stores the inventory of keys and does not track how a specific key is used, although PayPal does provide options for making this process simpler.

When you specify the inventory for a button, you can specify the usage of download keys:

- Whether the keys you specify should be appended to the current list of keys or whether the list of keys should be replaced, which allows you to replenish the list of keys or replace the list entirely
- Whether the list of keys are to be reused or not

If you do not reuse keys, PayPal will also notify you when the item is “sold out,” meaning that there are no more keys available.

## Specifying download keys with NVP

The following example shows how you might create several keys using the `BMSetButtonInventory` API operation:

```
METHOD=BMSetInventory
...
HOSTEDBUTTONID=49760
REUSEDIGITALDOWNLOADKEYS=0
APPENDDIGITALDOWNLOADKEYS=1
L_DIGITALDOWNLOADKEYS0=3tsnheostenthueirue97987ueitheunth
L_DIGITALDOWNLOADKEYS1=
L_DIGITALDOWNLOADKEYS2=3tsnh
L_DIGITALDOWNLOADKEYS3=3tsnh0923nth2349oeunh
```

These keys are appended to existing keys for the item and should not be reused.

## Button Manager API Summary

The Button Manager API is available for both NVP and SOAP.

API Operation	Description
<code>BMCreateButton</code>	Create button code
<code>BMUpdateButton</code>	Update a hosted button
<code>BMManageButtonStatus</code>	Delete a button

<b>API Operation</b>	<b>Description</b>
BMGetButtonDetails	Obtain information about the parameters associated with a button
BMButtonSearch	Obtain a list of all buttons
BMGetInventory	Obtain the inventory levels associated with a button
BMSetInventory	Specify the inventory levels associated with a button

## Hosted Solution Links

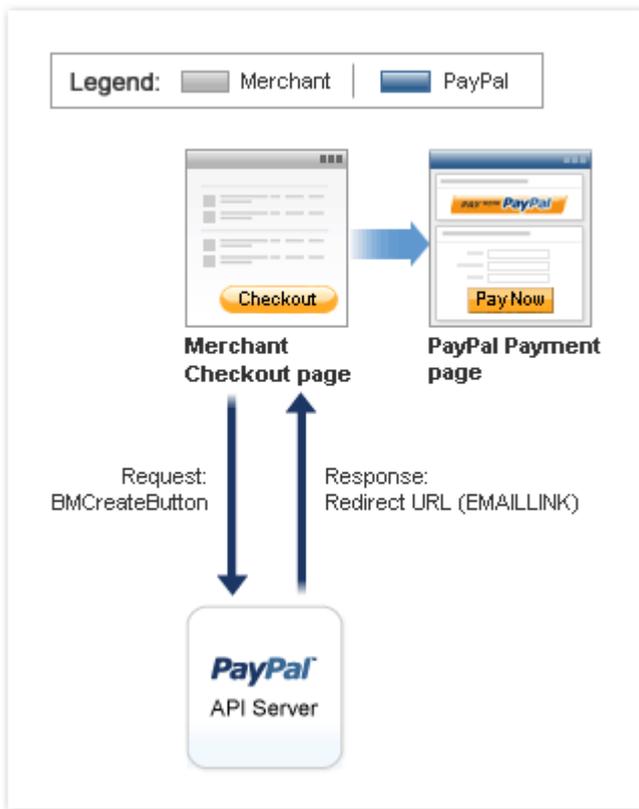
Hosted Solution links are URLs you create with the Button Manager API to initiate the Hosted Solution checkout flow. You can also use the button code associated with the link to initiate the flow.

Note:

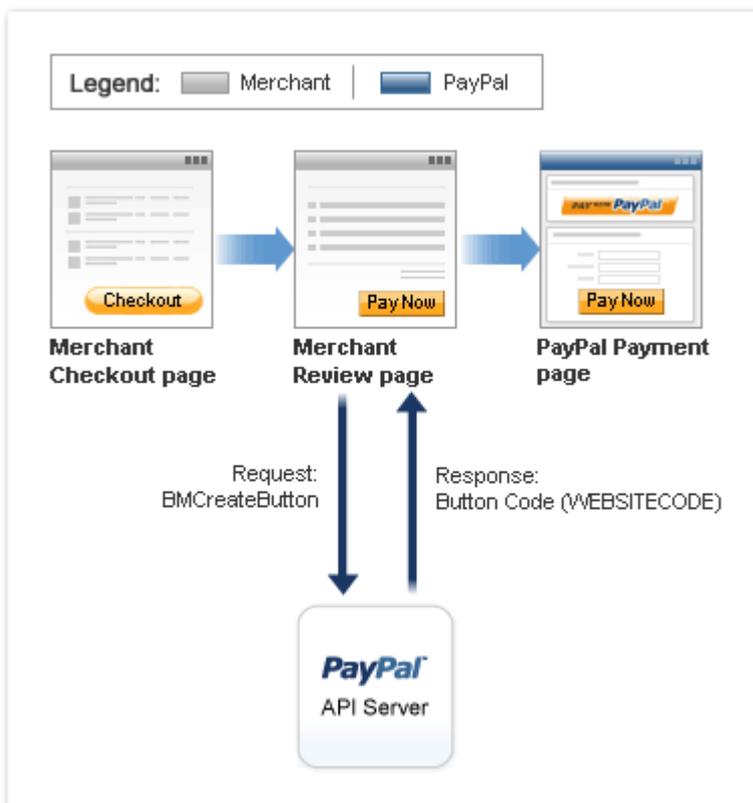
Although you can use the Button Manager API to create buttons that initiate the Hosted Solution checkout flow, do not confuse a button for Hosted Solution with hosted buttons that you also create with the Button Manager API.

You create the Hosted Solution checkout link dynamically when your buyer attempts to check out. For example, when your buyer clicks your check out button, you call the `BMCreateButton` API operation to create the link and then redirect the buyer's browser to PayPal using the link. The buyer then pays on the PayPal Hosted Solution page. After making the payment, PayPal returns the buyer to the page you specified when you created the link.

The following diagram shows the link being returned on your checkout page, which you use to redirect the buyer to the PayPal payment page:



Alternatively, you can use the button code if you want to provide a button on your review page to initiate the hosted solution payment flow, as shown in the following diagram:



HTML variables control the presentation of the Hosted Solution pages, the information contained on the pages, and pages to which a buyer can be returned when leaving Hosted Solution pages. For more

information about Hosted Solution and associated HTML variables, see the document for your geographic area:

<b>Merchant Country</b>	<b>Document</b>
Australia	<a href="#">Website Payments Pro Hosted Solution Integration Guide</a>
France	<a href="#">PayPal Integral Evolution Integration Guide</a>
Hong Kong	<a href="#">Website Payments Pro Hosted Solution Integration Guide</a>
Italy	<a href="#">PayPal Pro Integration Guide</a>
Japan	<a href="#">Website Payments Plus Integration Guide</a>
Spain	<a href="#">Pasarela Integral Integration Guide</a>
United Kingdom	<a href="#">Website Payments Pro Hosted Solution Integration Guide</a>

## **Granting Third-Party Permission for APIs**

If you allow a shopping cart or another party to create buttons on your behalf, you must grant the party permission to execute Button Manager API operations for you.

To grant third-party permissions

1. Log in to your PayPal account.
2. Select My Account Profile.
3. Click API Access from the Profile Summary.
4. Click Grant API Permission.
5. Click Configure a custom API authorization.
6. Enter your Partner API username, as specified by your shopping cart or third party.
7. Check each Button Manager API you want to provide access to:

- BManageButtonStatus
- BCreateButton
- BUpdateButton
- BSetInventory
- BGetInventory
- BButtonSearch
- BGetButtonDetails

8. Click Submit.

## Specifying HTML Variables

When you create or update a button using the Button Manager API, you must specify the same HTML variables that you specify when creating any Website Payments Standard button. Although you can use the `L_BUTTONVAR $n$`  `ButtonVar` field to specify any HTML variables, some variables are commonly used in specific ways.

The following table provides additional information about some of these variables:

HTML Variable	Notes
<code>item_name</code>	Name or description of item. Must be specified for Add to Cart buttons. Character length and limitations: 127 single-byte alphanumeric characters.
<code>amount</code>	The price or amount of the item. Required for Add to Cart buttons. May not be used when a dropdown with price ( <code>L_OPTION0PRICE<math>n</math></code> ) is defined. Limitations: Value must be a positive number. No currency symbol. Must have two decimal places, decimal separator must be a period (.), and the optional thousands separator must be a comma (,).
<code>a3</code>	Price of subscription. Must be specified for Subscribe buttons. Value must be a positive number. No currency symbol. Must have two decimal places, decimal separator must be a period (.), and the optional thousands separator must be a comma (,).
<code>p3</code>	Regular billing cycle. Must be specified for Subscribe buttons. Limitations: Must be a positive integer greater than 0 and less than or equal to 30
<code>t3</code>	Regular billing cycle units. Must be specified for Subscribe buttons.
<code>shopping_url</code>	URL where recipients can shop and redeem gift certificates. Required for Gift Certificate buttons. Character length and limitations: 255 single-byte alphanumeric characters

**HTML  
Variable****Notes**

**no\_note** Must be specified for Subscribe buttons. Enables a subscriber to not be prompted to include a note with the subscription, a function which PayPal subscriptions does not support. This variable must be included, and the value must be set to 1.

Secure Merchant ID or Email Address. When omitted, defaults to the secure merchant ID of the merchant. If an email address is specified then it the following requirements apply:

- business**
- A merchant or 3rd Party calling the API directly may specify an unregistered email and create an unencrypted button only.
  - A 3rd Party calling the API on behalf of a registered merchant must specify an email address associated with the merchant account.

Character length and limitations: 127 single-byte characters.

**item\_number** Item number or ID. Character length and limitations: 127 single-byte alphanumeric characters.

**lc** If specified, it overrides the value set in the `BUTTONCODE` `ButtonCode` field.

For a complete list of HTML variables and complete information, see [HTML Variables for Website Payments Standard](#).

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