eFront

PayPal Integration Guide

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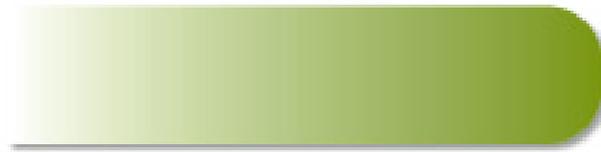
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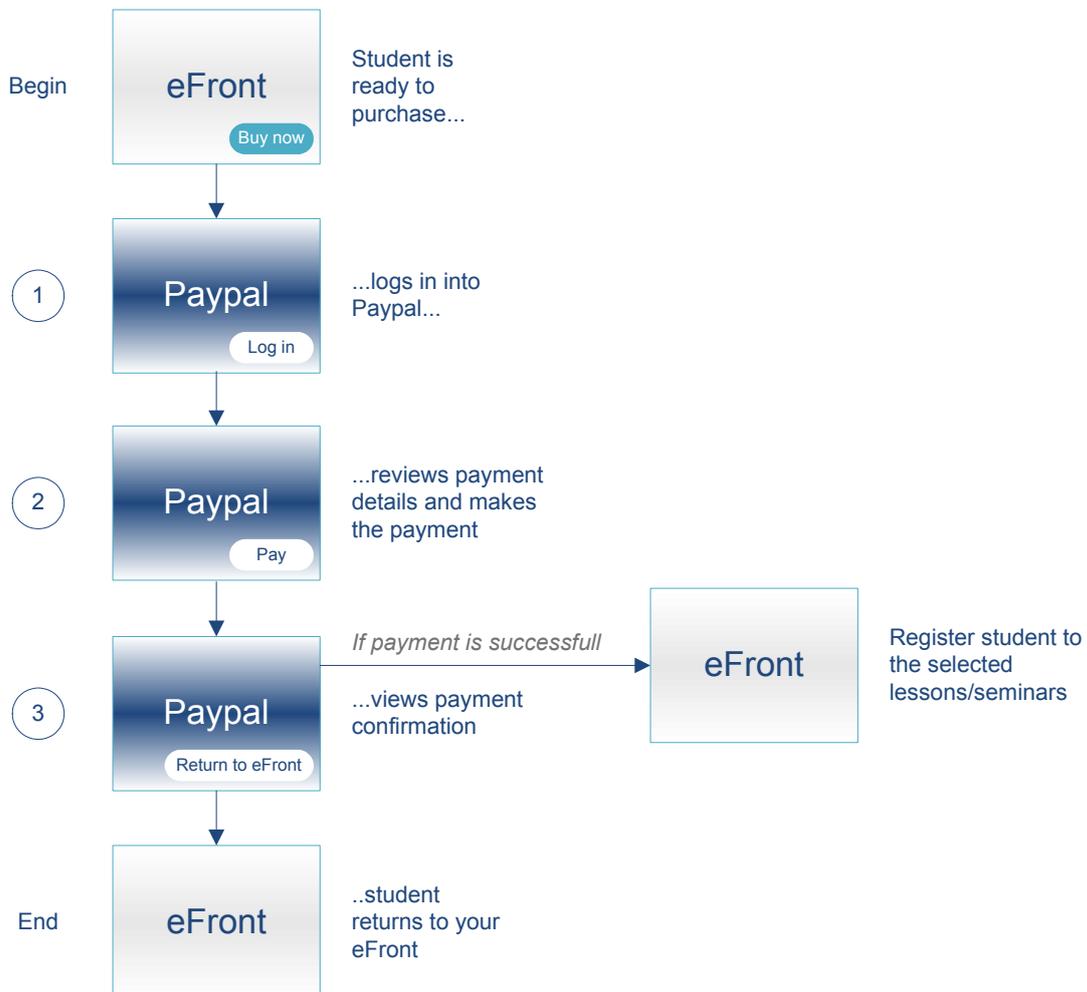phone: (+30) 210 6756008, (+30) 210 6756112
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CONTENTS

1. GENERAL

This support guide describes how to utilize PayPal through eFront in order to accept payments for item purchases (ex. lessons or seminars). This manual is intended for eFront administrators.

2. INTRODUCTION

In general, PayPal let you accept payments for your services. When you enable PayPal support in eFront, you can offer users with lessons and seminars in predefined prices. The end user can select some of the provided lessons/courses and billed automatically through the PayPal system. The transaction logic is embedded to eFront making the whole process easy to setup. In the eFront system the user selects what he wants to buy and then transferred automatically to PayPal in order to give his card details and finish the transaction.

Begin — eFront **Buy now** — Student is ready to purchase...

1 — Paypal **Log in** — ...logs in into Paypal...

2 — Paypal **Pay** — ...reviews payment details and makes the payment

3 — Paypal **Return to eFront** — *If payment is successfull* ...views payment confirmation → eFront — Register student to the selected lessons/seminars

End — eFront — ..student returns to your eFront

Figure 1. Payment sequence through PayPal
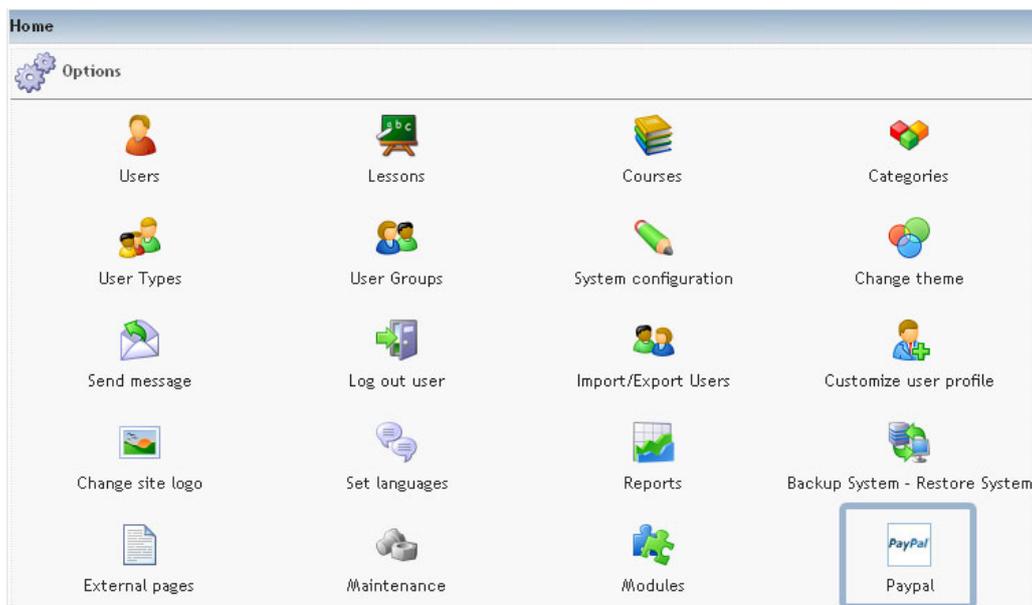
3. CONFIGURATION

3.2 EFRONT CONFIGURATION

With the administrative rights you log in the eFront system (Figure 2).

Figure 2. Log in screen

In the control center you select the PayPal option (Figure 3).

Figure 3. Control Center

This page shows the transactions that have been made so far in two different tabs in order to be better handled (it will be described in a following section). At the top and left of the page there is a link "PayPal configuration panel" where you can configure eFront for PayPal payments (Figure 4).

Figure 4. PayPal administrator page

In the configuration panel (Figure 5) you must fill at least your PayPal business address. This is the account to which all payments will be tranfered. Additionally, you can choose if you want to enable notification messages to students, professors and admins for each transaction. In order to enable/disable PayPal payments you just need to set/unset the PayPal email address.
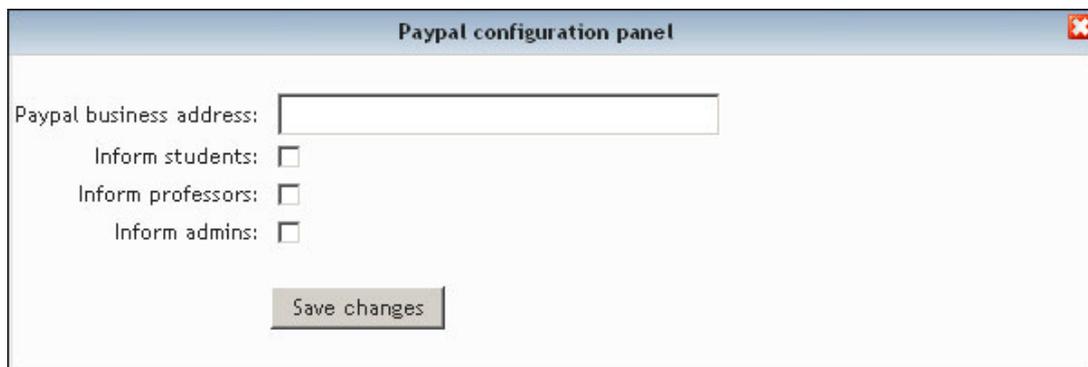
Figure 5. PayPal Configuration Panel

3.3   PAYPAL CONFIGURATION

Finally the administrator has to enable the IPN in his PayPal account. He can activate IPN for his PayPal account through his account profile. When you activate IPN through your account profile, the notification URL that you specify is used for all your IPNs. You can override the value on specific payment transactions by including notification URLs in the programming code that your website sends to PayPal when people pay you.

To activate IPN through your account profile:

- Log in to your Business or Premier Account.

- Click the **Profile** sub-tab.

- In the **Selling Preferences** column, click the **Instant Payment Notification Preferences** link.

- Click the **Edit** button.

- Select the checkbox to activate IPN.

- In the **Notification URL** text box, enter the URL that will receive and process IPNs. In this occasion the URL is something like: http://your-eFront.com/ipn.php

- Click the **Save** button.

4. TRANSACTIONS HANDLING

Assume that a user has selects a few items and they have been added to his shopping basket. If these items have a price (an item may not have a price which makes it a free item by default) then the user proceeds and makes a payment through PayPal. Prior sending the user to PayPal the transaction is being tracked (labeled as not-finished) and can be viewed from eFront's administrator menu in the main PayPal screen (Figure 4).

4.2   FINISHED TRANSACTIONS

If this payment is successful then on the background with the use of the IPN (Instant Payment Notification) technique, the student is being registered in the items that he had selected before. If he follows the return address that PayPal provides he can see a message about the successful transaction (note that this is not a necessary action in order to be registered for the selected items because this was made with the IPN). Info about this transaction is available from the administrator in the main PayPal screen (Figure 6) and the tab with title "Finished" as it has changed status.

Figure 6. Finished transactions

In (Figure 6) we can see some Finished transactions. The administrator can see at a glance some basic information about these transactions and in the last column he can see in detail all the variables that have been transferred through PayPal (Figure 7). A detailed description of all these variables is available on the following sections.

id:	4	mc_gross:	12
settle_amount:	15.09	address_status:	confirmed
payer_id:	7B9Q3TQYH3L8L	tax:	0.00
address_street:	1 Main St	payment_date:	07:23:52 Feb 01, 200
payment_status:	Completed	charset:	windows-12
address_zip:	95131	first_name:	Test
mc_fee:	0.70	address_country_code:	US
exchange_rate:	1.33562	address_name:	Test User
notify_version:	2.4	settle_currency:	USD
custom:	0802011702451ae4	payer_status:	verified
business:	businessmail@efrontlearning.gr	address_country:	United States
address_city:	San Jose	quantity:	1
verify_sign:	A.MoTOojN7	payer_email:	clientmail@efrontlearning.gr
txn_id:	77N000108H2791037	payment_type:	instant
last_name:	User	address_state:	CA
receiver_email:	businessmail@efrontlearning.gr	payment_fee:	
receiver_id:	332WDAKSBQQ6N	txn_type:	web_accept
item_name:	Maya Civilization	mc_currency:	EUR
item_number:	5	residence_country:	US
test_ipn:	1	payment_gross:	
shipping:	0.00	status:	paypal

Figure 7. Finished transaction details

4.3 NOT-FINISHED TRANSACTIONS

If the payment was not successful then there was a problem such as:

- The student had not made any payment, or

- The student had problems with the data transferred through PayPal, or

- There was a problem with the student's card etc.

In such an occasion the transaction remains "Not-Finished" and the administrator can view it in the main PayPal screen (Figure 8) under the tab with the title "Not-Finished".

Figure 8. Not-Finished transactions

Figure 8 illustrates some Not-Finished transactions. The administrator can see at a glance some basic information about these transactions or a detailed report with all transaction-related information (Figure 9). A detailed description of these variables is available in the last section.

Figure 9. Not-Finished transaction details

5. HOW IPN WORKS

Instant Payment Notification is a mechanism by which your eFront system receives the transaction data. IPN posts individual transaction information to a URL on your eFront system that you have programmed to process this incoming data. To use IPN, you must activate it, because it is disabled by default in the administrator's Paypal account. In the eFront system IPN is the default way in order to register a student for the lessons or/and seminars that he has selected so the activation of IPN in the administrator's Paypal account its inevitable.

If IPN is activated, you receive a notification from Paypal in the following cases:

- When a payment is first sent, indicating that the status of the payment is Completed or Pending

- When a payment clears, fails, or is denied, if the status was pending

In other words when Instant Payment Notification is activated, you will receive an IPN when a payment is first sent, which will state the status of the payment: Completed or Pending and when the payment is Pending, you will receive another IPN when the payment clears, fails, or is denied. All these IPN handles are controlled by your eFront system automatically.

Figure 10 illustrates the IPN steps that ensures that PayPal and eFront are synchronized on the status of the transaction
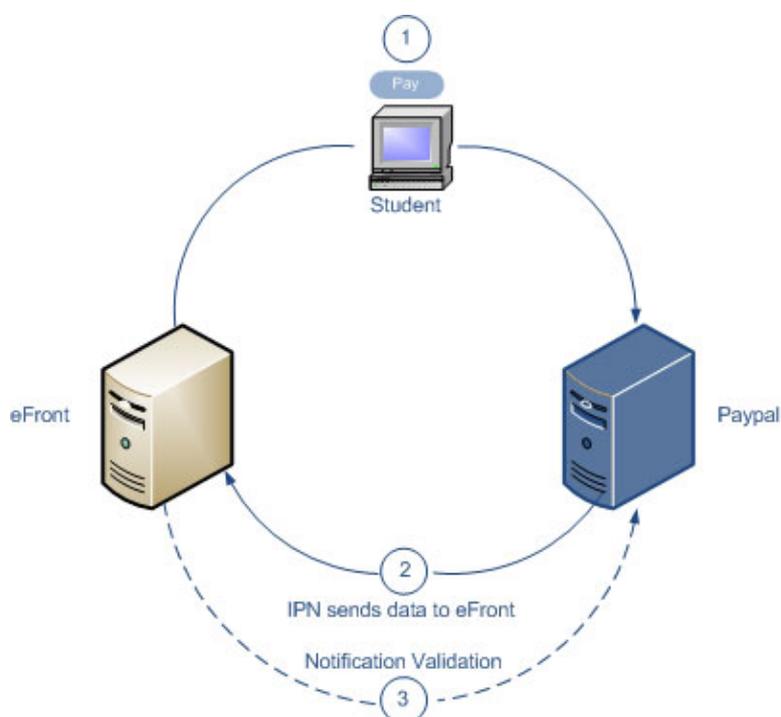
Figure 10. IPN steps

1. A student payment triggers IPN. If the payment has a "Pending" status, you receive another IPN when the payment clears, fails, or is denied.

2. PayPal posts HTML FORM variables to a program at a URL you specify. You can specify this URL either in your account profile or this can be done by the eFront system where the URL is being configured in the installation process. This post is the heart of IPN. Included in the notification is the student's payment information (such as student name, payment amount). All possible variables in IPN posts are detailed in the next sections. When your eFront system receives a notification, it process the incoming data in order to register or not a student to the selected lessons or/and seminars.

3. Your eFront system then validates the notification to ensure that it is legitimate.

Because credit card and bank information is not transmitted in Instant Payment Notification (IPN), PayPal does not require Secure Sockets Layer (SSL) to encrypt IPN transmissions.

6. TRANSACTION VARIABLES

In the detailed transactions screen (**Figure 7**, **Figure 9**) there are various variables that describe this transaction. The following table includes a list of the possible values of these variables together with their description.

Variable	Possible Values	Description
id		The id of the transaction in the eFront system
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 signifies a refund or reversal, and either of those payment statuses can be for the full or partial amount of the original transaction.
settle_amount		Price of the items
address_status	confirmed	Student provided a confirmed address
	unconfirmed	Student provided an unconfirmed address.
payer_id		
tax		Transaction-based tax override variable. Set this to a flat tax amount

		to apply to the transaction regardless of the administrator's location. This value overrides any tax settings set in your PayPal account profile.
address_street		Student's street address.
payment_date		Time/Date stamp generated by PayPal, in the following format: HH:MM:SS DD Mmm YY, YYYY PST
payment_status	Canceled_Reversal Completed Denied Expired Failed Pending Refunded Reversed Processed Voided	**Canceled_Reversal:** A reversal has been canceled. For example, you won a dispute with the customer, and the funds for the transaction that was reversed have been returned to you. **Completed:** The payment has been completed, and the funds have been added successfully to your account balance. **Denied:** You denied the payment. This happens only if the payment was previously pending because of possible reasons described for the Pending Reason element. **Expired:** This authorization has expired and cannot be captured. **Failed:** The payment has failed. This happens only if the payment was made from your customer's bank account. **Pending:** The payment is pending. See pending reason for more information. **Refunded:** You refunded the payment. **Reversed:** A payment was reversed due to a chargeback or other type of reversal. The funds have been removed from your account balance and returned to the buyer. The reason for the reversal is specified in the ReasonCode element. **Processed:** A payment has been accepted. **Voided:** This authorization has been voided.

charset		The charset in which the transaction was made
address_zip		Zip code of customer's address.
first_name		Customer's first name
mc_fee		Transaction fee associated with the payment. mc_gross minus mc_fee equals the amount deposited into the receiver_email account. Equivalent to payment_fee for USD payments. If this amount is negative, it signifies a refund or reversal, and either of those payment statuses can be for the full or partial amount of the original transaction fee.
address_country_code		Two-character ISO 3166 country code
exchange_rate		Exchange rate used if a currency conversion occurred.
address_name		Name used with address
notify_version		The value of the notify_version variable is the version number of Instant Payment Notification that makes the post.
settle_currency		The currency of the payment. Defines the currency in which the monetary variables (amount, shipping, shipping2, handling, tax) are denoted.
custom		The transaction Code in order to prevent payment injections
payer_status	verified unverified	Customer has a Verified PayPal account. Customer has an Unverified PayPal account.
business		Email address for your PayPal account.
address_country		Country of student's address.
address_city		City of student's address.
quantity		Quantity as entered by the student or as passed by you, the eFront. If this is a shopping cart transaction, PayPal appends the number of the item (e.g. quantity1, quantity2).
verify_sign		The value of verify_sign is an encrypted string used to validate the

		authenticity of the transaction.
payer_email		Customer's primary email address. Use this email to provide any Credits.
txn_id		A unique transaction ID generated by PayPal.
payment_type	echeck instant	**echeck:** This payment was funded with an eCheck. **instant:** This payment was funded with PayPal balance, credit card, or Instant Transfer.
last_name		Customer's last name
address_state		State of customer's address
receiver_email		Primary email address of the payment recipient (that is, the merchant). If the payment is sent to a non-primary email address on your PayPal account, the receiver_email is still your primary email.
payment_fee	Transaction-specific For USD payments only	USD transaction fee associated with the payment. payment_gross minus payment_fee equals the amount deposited into the receiver email account. Is empty for non-USD payments. If this amount is negative, it signifies a refund or reversal, and either of those payment statuses can be for the full or partial amount of the original transaction fee.
receiver_id		Unique account ID of the payment recipient (i.e., the merchant). This is the same as the recipient's referral ID.
txn_type	cart express_checkout send_money virtual_terminal web-accept	**cart:** Transaction created by a customer: • Via the PayPal Shopping Cart feature. • Via Express Checkout when the cart contains multiple items. **express_checkout:** Transaction created by Express Checkout when the customer's cart contains a single item. **send-money:** Transaction created by customer from the Send Money tab on the PayPal website. **virtual_terminal:** Transaction created with Virtual Terminal.

		web-accept: Transaction created by customer via Buy Now, Donation, or Auction Smart Logos.
item_name		Item name as passed by eFront. If this is a shopping cart transaction, PayPal will append the number of the item (e.g., item_name_1, item_name_2, and so forth).
mc_currency		
item_number		Pass-through variable for you to track purchases. It will get passed back to you at the completion of the payment. If omitted, no variable will be passed back to you.
residence_country		Two-character ISO 3166 country code
test_ipn		The purpose of test_ipn is to provide testing programs a means to differentiate between Sandbox IPN and live IPN.
payment_gross	Transaction-specific For USD payments only	Full USD amount of the customer's payment, before 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 signifies a refund or reversal, and either of those payment statuses can be for the full or partial amount of the original transaction.
shipping	Transaction-specific	Shipping charges associated with this transaction. Format: unsigned, no currency symbol, two decimal places.
status	submitted completed invalid-data invalid-ipn wrong-transaction-id other	**submitted:** student has filled his cart and goes to PayPal website **completed:** student has completed his payment through PayPal successfully **invalid-data:** the date that has been sent from eFront to PayPal was invalid **invalid-ipn:** the data that was send from PayPal to eFront was invalid **wrong-transaction-id:** the transaction id of paypal or the transaction id of eFront was wrong during the IPN POST **other:** here can be any other value from **payment_status**

7. CURRENCIES ALLOWED

Administrators can use the following currencies.

Currency	ISO-4217 Code
Australian Dollar	AUD
Canadian Dollar	CAD
Swiss Franc	CHF
Czech Koruna	CZK
Danish Krone	DKK
Euro	EUR
Pound Sterling	GBP
Hong Kong Dollar	HKD
Hungarian Forint	HUF
Japanese Yen	JPY
Norwegian Krone	NOK
New Zealand Dollar	NZD
Polish Zloty	PLN
Swedish Krona	SEK
Singapore Dollar	SGD
U.S. Dollar	USD