



WpAppsForThat.Com

The Series of Wordpress Apps

IPN Data Handling

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Prologue & Dedication

Instant Payment Notification (IPN) is a message service that automatically notifies merchants of events related to PayPal transactions. Once received, merchants can use it to automate back-office and administrative accounting including automatic fulfillment of orders.

Why Write The World of IPN? Because it is an obscure solution for Instant Payment Notifications outside the Wordpress Plugin community, and it is not that difficult once the inner working are laid out in a meaningful order. Given the above, my goal is to Simplify the Application and Provide It Free to the everyone in the Wordpress World. For me, it's Paying It Forward!

Dedication to Donna!

Book number one is dedicated to my lovely wife of nine years, Donna Morgan. Donna provides inspiration for my retirement projects, which now hopes to include writing a book about The World of IPN.

My Bio

A Civil Engineer by education who wondered into Applications Development in the mid 1980s, and worked there until retirement in 2013. However, I still dabble in front-end WordPress app development (and now in 2022 FSE).

Data processing was my favorite type of application development, specifically telephone billing in the 80's and early 90s. The last big project was data processing design-develop in a successful \$31M Class-Action Law suit case (settled around 2010-2011).

Around 2000 I entered web development using Perl and open source databases. My work also included a software team in Romania. Somewhere after 2010 I discovered WordPress, while working in the Corporate world.

In 2015 and 2016 I created two club websites in WordPress. However, after many frustration years with plugins, it became obvious the best solution was Learn Now To Write Front-End Apps for WordPress. Mission tackled and accomplished in 2019 and 2020. Now it is time to pass on this knowledge.

In the summer of 2022 Dave decided to re-take on the challenge of write a full-functioning front-end IPN App for Wordpress. This endeavor originally began May, 2020 and was abandoned a few months later for lack of knowledge. Now in mid-October 2022 it has become a functional App for IPN.

If you're inspired and have some required skills, it is probably time for you to dip your toes in the water. Apps which you can download from github.com should get you started and eventually successful! Most of all HAVE FUN!

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Looking Deeper Into IPN?

Instant Payment Notification (IPN) is a message service that automatically notifies merchants of events related to PayPal transactions. Merchants can use it to automate back-office and administrative functions, including automatically fulfilling orders and providing customers with order status.

How is PayPal IPN Used? Simply stated it is a Listener App that gets triggered when PayPal sends a request to the website.

Is a listener a special application? No, it is simple one word added to the top of a script.

How is it activated? An App on a website will send a payment request via a form submit to PayPal. PayPal in return will send transaction data back to your configured website.

Who can use IPN? Most any business, club, organization or individual selling products or services via the internet.

What else is involved? This is a complex answer that you should see and understand from this Ebook and the App download from my [Github Site](#).

Let's get started reading and learning about the mysteries and myths of PayPal© IPN.

Requirements To Get Started

One - Minimum Skill

If you do not know about or haven't used Wordpress, the App solution is not for you. Please do not continue.

Two - Wordpress

This App is intended operate on a current versions of Wordpress, PHP and a reliable theme. Then you need to create a Child Theme.

Three - Installing Apps

If YOU ARE NOT familiar with installing and running front-end Apps on Wordpress, see [Basic 101 on Dave's Github](#), which also references a [DIY Overview - A Quick Start on WpAppsForThat.Com](#). If you master this lesson, you should survive install IPN, but there is more: MySQL!

Four - Install MySQL Database

Part of Wordpress is generally cPanel. The person responsible for cPanel will need to download and install the [wp_paypal_transactions-10182022-1.sql](#) file from the [dva/paypal-ipn repository on my Github](#) - this is a direct line to the file and if it changes you will have to find it on the repository. File also referenced in the next step.

Five - Download / Install IPN Scripts

By now you should know how to navigate to my repository on [Github](#). Download the below three files. Simple trick is right-clicking each file and use the popup to download it.

- Local Test (local-test.php)
- Paypal IPN (paypal-ipn.php)
- PaypalIPN (PaypalIPN.php)
- MySQL database table (wp_paypal_transactions)

Six - Install the scripts

Again referring to [DIY Overview - A Quick Start on WpAppsForThat.Com](#) and upload each file.

Seven - Create Template Files

Guess what? Each script needs a referencing page to function in Wordpress.

Once again back to the DIY page create two pages and assign their respective templates:

- Page name = Local Test w/template also Local Test
- Page name = PayPal Ipn w/template also PayPal Ipn

Remember the scripts must be uploaded to the child theme directory before the page is create, else it will not appear. If this happens, save the page, get out of there and go back to the page. Now it should appear per instructions.

Once you are this far, you should be ready to locally run the App.

Eight - Create Menu Option

Now put the App on a menu for ease of using.

Now - Sit Back And Breathe!

Next each script will be discussed and finally the actual processing will be examined start to finish.

The objective is to give everyone a full view of the inner working of the IPN process and leave you with enough knowledge to implement our own solutions.

Last - Looking Down The Road

By the end of you should be wondering what is next. Some options are WP User interface, integrating with existing or future applications about payment processing.

Back in 2019 and 2020 I already wrote a complete PayPal membership applications for the Wood Worker of Green Valley Recreation of Green Valley, Arizona. The IPN interface will be implemented by January 2023.

Script #1 - local-test.php

Local Test App Screen

User Login - Name	6322 - Joe Person
Transaction & Type	Completed - credit card
Select Payment Amount	\$40 - Membership
Payment	Membership, Drawers & Lockers
Local or IPN Simulator	Run Local Test
<div>LOCAL TEST</div>	

Local Configuration

- Line 57 set \$destination_url to your URL.
- Nothing else required for Local or IPN Simulator testing in these scripts.

IPN Simulator URL

- Use the same URL value as defined above.

Run The Local Test App

- You can use the default settings which runs it as the default setting of Completed and Credit Card.
- Submit & see the output on the next screen.

Output from IPN Local Processing

PP->TOP OF LOCAL DEV - IPN TEST PROCESS! -> [IPN Local Test](#)

PP-1a1->Before New PaypalIPN Function defined

PP-1a2->After New PaypalIPN Function defined

PP-1a4-> Running as LOCAL SIMULATOR

PP-2a1->Before set_name Function call

PP-2a2->After set_name Function call

IPN-1a1-> Inside get_name function: 1

IPN-1a2-> Invalid = VERIFIED

- This output shows processing steps as the scripts run.
- Displays are provided by echo statements in both scripts.
- Also include in the output is the log file name.
- This data is saved on your server in this location:

Example of Log File Directory

Select the file you want to upload to "/home1/davelkwd/wpappsforthat.com/wp-content/uploads/paypal-ipn-logs".

Script Function

- A front-end App to test the PayPal IPN interface and save data to a text file and MySQL database table.
- This script can also be enhanced to be a PayPal front-end for payments.

Script Settings

- \$destination_url (**required change**):
 - Test is used to call script = paypal-ipn.php

- **Live** is used to sent the page and data to paypal.com
- \$paypal_seller:
 - **Test** not used.
 - Live send as hidden data to identify the seller (you).
- \$timestamp:
 - Main value is to identify the type and status of each transaction in TEST MODE and LIVE MODE.
 - Also part of the saved text filename, which includes payment_status and payment.
 - Also two saved columns in the DB table.
- \$txn_id:
 - Test simulates a PayPal ID.
 - Live is the PayPal ID.
- \$ws_user_id:
- \$first_name & \$last_name:
 - Are default variables, which are passed in the two LOCAL test environments.
- \$shop_txn_id
 - Is a variable used in a previous App that was auto-generated from wp_users.ID and a timestamp.
 - The variable was passed in the URL form and retrieved back via Success and Cancel buttons on PayPal site.You can do the
- \$ws_user_id:
 - A random-generated wp_users.user_login ID + the timestamp, which creates a unique ID for the record. Anyone can do it. It would also be covered in the future App.
- ADD QUERY HERE FOR WP_USERS INTERFACE:
 - Current functionality has been removed from this distribution.
 - It may be another App in the future.
- Web Page Form:

- It is used to make the local testing more realistic. Its uses are limited to your imagination. However, be aware your modifications may mess up a lot of code!
- They have been put together here to simplify html code, but they do complicate things on the backend.
- Before you make changes, make sure you know what you are doing.
- Web Page Form - payment_status:
 - This is a two-part field which includes PayPal fields:
 - payment_status and
 - payment_type.
- Other Selections:
 - Fairly simple so no need to document.
- Run Local Test Options:
 - Run Local Test:
 - Runs code in an INVALID environment but actually looks like a VERIFIED environment.
 - Run Local Simulator Test:
 - Simulates an IPN transaction.
 - Learn More: DOC - CONSTANT SECTION
 - See this note at the top of the PaypalIPN.php script.
 - Submit - Hidden Rows:
 - Contains additional processing data for the submitting form.

Script #2 - paypal-ipn.php

Script#3 - PayPalIPN.php

Text Data Files

MySQL Database

Wrap Up On The World Of IPN

About The Author



Dave Van Abel is an identical twin and only enjoyed a great adventure with Don for 17 short years of life. Tragedy took my identical twin brother and our father suddenly in 1963, and life has never been the same. However, now my wife Donna has finally filled that empty space late in my life.