# GreenPay™

Green Payment Processing

# OpenCart Extension

Version 2.0.0

# GreenPay™ By Green Payment Processing

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# Introduction

GreenPay™ by Green Payment Processing (http://www.green.money) v2.0.0 for OpenCart is an extension for OpenCart which adds an eCheck payment gateway to the checkout process in your online store.

GreenPay™ by Green Payment Processing adds an eCheck payment gateway that can be used in any OpenCart online store to accept eChecks as a method of payment when connected with a Green Payment Processing merchant account. When the GreenPay™ plugin is enabled, an eCheck payment option is available upon checkout which can accept a routing number and account number to create an eCheck that will be processed by Green Payment Processing.

# Requirements

1. You must already be a Green Payment Processing registered and approved merchant. If you are not yet activated or have yet to apply, feel free to read the rest of this manual but you will be unable to follow the steps without being activated! You can contact our Customer Service team via email at support@green.money for any questions!
2. Your OpenCart site should be using OpenCart version 3.x or greater. The plugin was developed and fully tested on the latest version of OpenCart, currently 3.0.3.2.
3. Your site must be SSL secured! Our service resides on a gateway behind 2048 bit SSL encryption and since we're dealing with sensitive banking information, we require all our partners to be SSL secured as well. If you are unsure whether your site is secure, please consult with your IT team or hosting provider.

# First Steps

Green recommends that your version of OpenCart be at least 3.x. The plugin was developed specifically on 3.0.3.2 but any 3.x version should be sufficient to meet the API requirements of the plugin. Green makes no guarantees the plugin will work on any version outside of 3.x!

Before we can begin installing the extension, we have to modify a couple of the OpenCart files. The modification we make is to allow our extension to create new API methods that make it possible for us to update your store through push notifications. What that means is whenever a check is received or processed by us, we can update your order status and add order notes!

In order to enable extensions to add to the OpenCart API, you will need to edit one of the OpenCart core files. First, connect to your web server using your favorite FTP client and navigate to your OpenCart installation's root direction. From there, find the file at the following path: `{OpenCart Root}/admin/controller/marketplace/install.php`. Open that file in a text editor. Look for the following section of code:

```
// A list of allowed directories to be written to
$allowed = array(
    'admin/controller/extension/',
    'admin/language/',
    'admin/model/extension/',
    'admin/view/image/',
    'admin/view/javascript/',
    'admin/view/stylesheet/',
    'admin/view/template/extension/',
    'catalog/controller/extension/',
    'catalog/language/',
    'catalog/model/extension/',
    'catalog/view/javascript/',
    'catalog/view/theme/',
    'system/config/',
    'system/library/',
    'image/catalog/'
);
```

This defines what sections OpenCart extensions are allowed to write to. We need to add one, so change that whole section to the following:

```
// A list of allowed directories to be written to
$allowed = array(
    'admin/controller/extension/',
    'admin/language/',
    'admin/model/extension/',
    'admin/view/image/',
    'admin/view/javascript/',
    'admin/view/stylesheet/',
    'admin/view/template/extension/',
    'catalog/controller/api/',
    'catalog/controller/extension/',
    'catalog/language/',
    'catalog/model/extension/',
    'catalog/view/javascript/',
    'catalog/view/theme/',
    'system/config/',
    'system/library/',
    'image/catalog/'
);
```

To be specific, note that we added `catalog/controller/api/` as a path in the middle there. Once you're done with that, save the changes to this file and, if you're editing via FTP make sure to upload the file back. If you're editing on the server directly through SSH then just save the file and the changes should take effect immediately and you can move onto the installation.

# Installation

We have two different options to install the plugin. Both steps require the plugin files first so you can download them from our [public GitHub repository](#)! This will ensure you have the most up to date plugin file. If you're unfamiliar with GitHub, don't worry, once you follow that link you can just click the big green button for "Clone or Download" and choose to "Download via ZIP" to get the file we need.

Once you have that .zip file, you'll need to unzip it on your computer. Inside of the unzipped folder will be a few items. Your folder structure should look something like this:

```
|-upload
|   |-admin
|   |-catalog
|   |-..
|-greenpay.ocmod.zip
|-README.md
```

## Installation via FTP

Use your favorite FTP client to connect to your server and navigate to your OpenCart's root directory. From there, copy all the files inside the upload folder into that root directory. Do not copy the upload folder itself, just the folders and files inside it.

Once those files are uploaded via FTP, you can login to your OpenCart admin and navigate to Extensions > Payments you should find the GreenPay™ plugin!

## Installation via Dashboard

Login to your OpenCart Admin Panel and go to Extensions > Installer. Click the Upload File button which will open a file browser. Navigate to the folder where you just unzipped to and select the greenpay.ocmod.zip file for upload. Once the progress is complete, you can navigate to Extensions > Payments and find the GreenPay™ plugin!

# OpenCart API Access

Once you have the plugin installed, we'll need to generate an OpenCart API key to use when we configure the settings in just a moment. To do this, login to your OpenCart Admin dashboard and navigate to System > Users > API.

In most cases, there will already be a key generated here with the name "Default". If you'd like, you can use that one or you can generate a new key by clicking the blue "+" icon button in the top right.

If you use the default key, click the Edit button (blue "pencil" icon button) in it's row to be taken to the view screen for it. If you generate a new key, you'll already be on this page! Take careful note here to copy both the **API Username** and **API Key** values as we'll need to use them in the next steps.

# GreenPay Settings

In order to get the GreenPay™ plugin configured now with your merchant account, navigate to Extensions > Extensions. Here, change the dropdown at the top of this page to view "Payments" extensions. When the table loads, you'll find all the payment extensions listed in alphabetical order.

Find the one for the GreenPay™ plugin and then click the blue "pencil" icon button to Edit the settings. If the blue button is disabled, then you may need to "install" the plugin first by clicking the green "+" icon button and waiting a moment! When you click to edit, you'll be taken to this page:

- **Enabled:** When this is checked, the secure checkout page will allow customers to submit payments. Turn this off to temporarily disable submission of payments through GreenPay™.
- **Your OpenCart URL:** The address someone would enter into their browser to get to your OpenCart store. This field should default to the correct value but if it doesn't, make sure to enter it. We use this value to call your store's API for push notifications.
- **Payment Mode** can either be in Live mode or Test mode:
  *Live mode*: the Live API endpoint is the Green Payment Processing system. When this mode is enabled, your checks will be processed regularly!
  *Test mode*: In test mode, no payments will actually be inserted but you can walk through the steps of submitting the payment. More details about Test Mode will be given later!
- **Verification mode:** can either be in Legacy mode or Permissive mode. These are further explained in the Legacy vs Permissive Verification mode section of the document but if you are unsure of what to put here, just use Legacy!

- **Debug[1]**: When in debug mode, the extension will output detailed information about its activity to the default PHP error log on your server.
- **Client ID and API Password:** Your Green API Credentials! To obtain your API Credentials, please contact us via email at support@green.money with the subject line "API Credentials"
- **OpenCart API Key - Name and Key:** These are the OpenCart credentials that you copied from earlier.
- **Verde™ Enabled for Customers**: The Verde™ Tokenization and Bank Login widget is only available for certain merchants. If you would like access to this service, please contact customer service at support@green.money with the subject line "Verde™ Tokenization Service". Once the service has been enabled, this section will become available and you can turn the widget on and off at checkout using the **Allow Widget For Customers** setting.

Once all the above has been configured with your values, make sure to hit the Save Changes button at the bottom of the page! If everything validates correctly, your values will save! If anything is incorrect, you may see errors, each of which should state the issue! For example, if your Green API credentials don't validate, a warning will display at the top of the page asking you to double check them.

## Test Mode

When in Test Mode, any attempts to enter a payment will make the API call to the live Green API, will complete all validation as normal up to the point of creating a check, and will respond to your store in the same manner as it would in Live Mode, but it will not create any checks. This is so you can ensure the connection to the API is up and running without needing to enter checks into our system.

Using Test Mode, you can test both a valid transaction and a failed transaction using our test routing and account numbers, that way you can see how the system responds to a transaction, what order notes get made in your OpenCart store, and what order statuses will be:
- Test Routing Number: 000000000
- Test Account Number: ending in -01 will pass, ending in -02 will fail eVerification.
    - ex. 100001 will pass and 100002 will fail.

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[1] This should only be used if you're an experienced user, a developer tracking down information, or have been explicitly directed to do so by a Green IT representative.

# Congratulations!

Your OpenCart store is now set up to take payments with your Green Payment Processing Merchant account!

At checkout, your customers will have the option to choose GreenPay™ as their accepted payment method. When they do this, they will be given fields to enter their routing and account number and from there, the check will be created in Green! If your account has Verde™ enabled, then instead of just the routing/account fields, they will be given a bank login widget so that they can securely login to their bank account to complete payment.

After the customer has completed the checkout, the order will be put into a Pending status in your OpenCart store and a note will be made detailing the payment information. You can find this by going to the Orders page in your administrative portal for OpenCart. Once the check is processed during a check batch, the order status will be updated to Processing in your OpenCart store to signify that the payment will be sent to the bank to process funds!

## Completing orders

The GreenPay™ plugin process completes when the order is marked as "Processing" in OpenCart. Using the OpenCart API credentials you supplied earlier, Green attempts to reach out to your store at the time the check is processed in our system to update the status of the order to "Processing." The reason our plugin doesn't mark the order as complete for you is because every Green Payment Processing merchant has a different definition of complete as far as payment receipt or product shipping.

Our plugin leaves that portion up to you as a merchant to decide when you'd like to handle those steps. Additionally, because these further updates are reliant on the OpenCart API, it is possible that your site is unavailable when we reach out and errors can occur when attempting to update

the order status. Our service will attempt a number of times to run the update but if it continually fails, we will no longer attempt updates. We recommend that all merchants manually  verify the processing status of a check if no updates are received within 24 hours.

## Status Updates

The GreenPay™ plugin acts as a gateway to allow your customers to checkout with our eCheck service through your store and due to the nature of eCheck processing, there will likely be some time that passes between when the order is created and the eventual processing of the check to your bank and then to you receiving the funds. Due to this, the GreenPay™ plugin extension will attempt at certain points in the process to update your store on the status of the check automatically.

The standard workflow is as follows:

1.  When an *order is created* in your OpenCart store, the order is initially created under the status **Cancelled** by default. This does not mean the order was actually cancelled, but rather that OpenCart uses this Cancelled status to ensure the order isn't displayed as a ready order in your Admin panel until payment is received.
2.  When a *check is created* in Green (which may be at the time of order creation or may be shortly thereafter if using the Verde™ tokenization service), the order status is updated to **Pending** and a note made with the Check ID and Number in the Green system (or a Unique Reference ID for Verde™).
3.  When *phone verification is completed* (if applicable to the check and your merchant settings) a note is made with the outcome of that process. If phone verification returned a failing code, the order status will be updated to **Failed**.
4.  When the *check is processed* by Green, the order status will be updated to **Processing** and a note made stating the check was processed.

Once the order status is set to Processing, the GreenPay™ plugin will no longer update your order as Green leaves the decision up to you as a merchant to decide when to mark the order as completed or otherwise.

# Legacy vs Permissive Verification mode

## Legacy:

Legacy is the default verification mode which can be set from the GreenPay™ settings page. All checks that return a Risky/Bad code are automatically cancelled and a note added to the order in OpenCart with an explanation. This is how the GreenPay™ plugin has functioned in the past so if you're unsure of which to choose, you should likely not change this setting and continue using Legacy mode!

## Permissive:

All checks that return a risky code that can be overridden are not cancelled but allowed into your Green Payment Processing Risky/Bad checks. The OpenCart order will be set to "Processing" status and will require you as a merchant to manually override the check and update the order status in OpenCart to fit your needs and risk acceptance.

If you have trouble with the verification mode, please contact Customer Support by emailing us at support@green.money or calling our helpline at 404-891-1450.

# Overriding Risky/Bad

When your OpenCart site is in "Permissive" verification mode as described above, when a Risky/Bad code is encountered, the order will be marked as "On-Hold" and will not be processed by Green Payment Processing unless you manually override the Risky/Bad code to process the order.

If you have trouble with the overriding Risky/Bad checks in your portal, please contact Customer Support by emailing us at support@green.money or calling our helpline at 404-891-1450.

# Verde™ Tokenization Service and Bank Login Widget

The Verde™ service is now available for our GreenPay™ plugin on OpenCart! This allows the customer to pay via eCheck without needing to know their bank routing and account number as our login widget walks them through the process of logging into their bank account directly!

This service is provided as an additional functionality and may be subject to additional terms of service and costs to your Green Account. For more information about this service and inquiries about how to get it turned on for your account, please contact Customer Support at support@green.money via email with the subject line "Verde™ Tokenization Widget" and a representative will be happy to help.

Once you have the tokenization service turned on for your Green account, you'll find that the settings page for GreenPay™ will allow you to set the checkbox for Allow Widget for Customers setting. See the Setup and Configuration of GreenPay section for further details. When this setting is enabled, your Checkout page will now look like something like this:
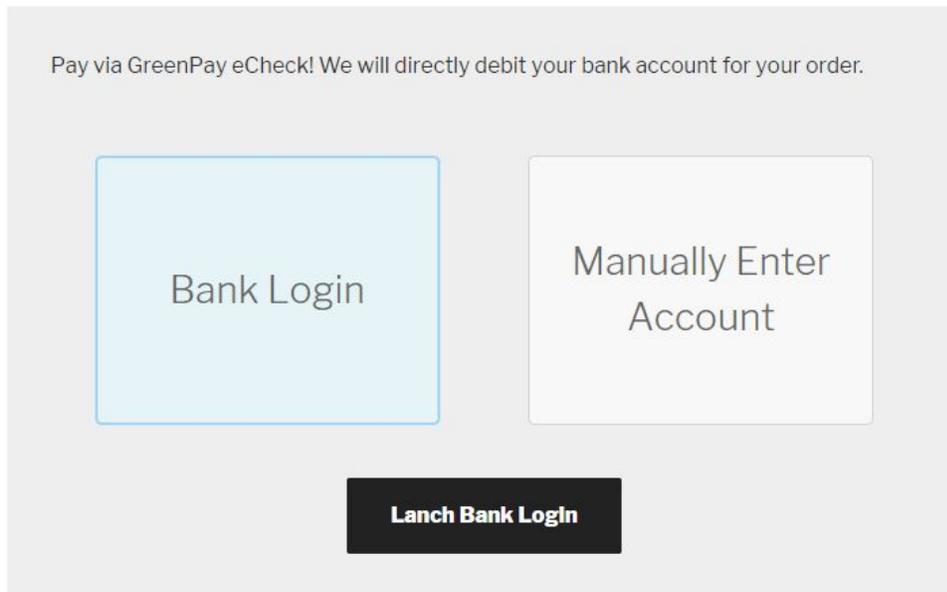


*Note that your exact look may differ based on your current OpenCart theme. The plugin attempts to match the formatting when possible so the above screenshot may not be accurate to your store.

Here, your customers can choose to go through the Bank Login widget or still manually enter their account information as previously detailed. When "Launch Bank Login" is pressed, the

widget fires up and walks the customer through the process of signing into their bank account through a highly secured process that goes through a tokenization service
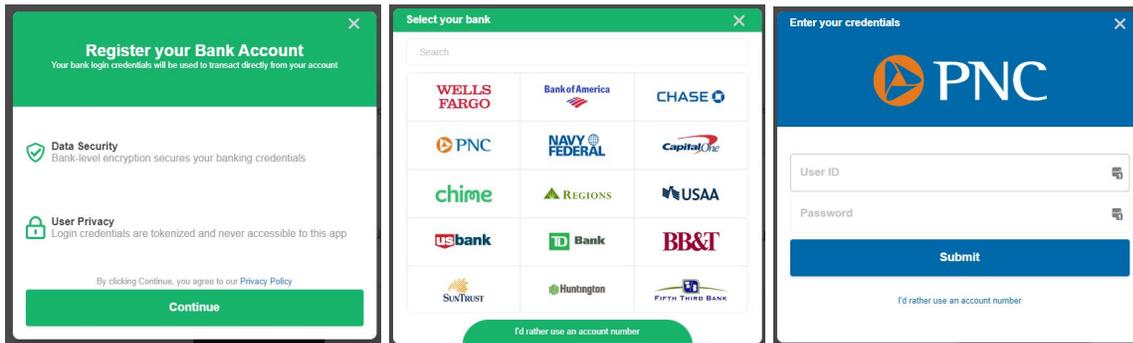


After they follow the prompts, their account is registered in the secure tokenization service and they can use that account to check out! Multiple accounts can be registered and the accounts are saved to their device so when they checkout in the future, they can continue using that tokenized account without needing to log back into their bank again!

# FAQ

This section will be dedicated to commonly asked questions as well as some helpful tips and tricks on using our plugin to get you started! If you're having issues after installing our plugin, check here for the answers first and if your question isn't answered here, feel free to reach out to us at support@green.money for more!

## I'm unable to save my configuration during setup: Green was unable to contact your store's API using the specified key!

Whenever you attempt to save your configuration, the credentials are securely sent to our server and our server attempts to validate them by making a quick call to your store using those credentials. If that call fails for any reason, then our server sends an error back and your store's configuration is reverted and not saved with us.

This error could be caused by multiple different problems so we'll start troubleshooting them in order of easiest to hardest!

1) Your OpenCart API credentials could have been copied or pasted incorrectly. Just ensure that you aren't adding any extra spaces or anything inadvertently when copying or pasting.
2) It could be caused by a file failing to copy during the installation process. If you installed via the Dashboard and received any errors during that process, this was the likely outcome of that error! You may need to uninstall the plugin and go back to the First Steps section and ensure that is completed, then reinstall per the instructions.
3) The issue could be caused by a temporary networking problem only indicating that our server is unable to reach your server. This could resolve itself or could be due to a faulty DNS configuration that your website or server admin team will need to correct.
4) If the issue doesn't resolve itself then the issue may be server specific. Unfortunately we won't have much to go on in the way of troubleshooting so you may need a developer or your server administration team to investigate potential server configuration problems. Feel free to reach out to us or get us in contact with your server team via email at support@green.money and we'll do what we can to help out!

## I'm getting an error at checkout! What should I do?

That is going to depend on the error. We'll start off with the most common errors we see which are:

## Invalid Email Address and Invalid Phone Number

This can be caused by two different issues, but one is more likely than the other! In very rare cases, this is caused by formatting issues. Our system does the best it can to try to read various formats including international format (using the +CountryCode identifier) as well as any number of different character separators, and no separators, but if any weird or odd characters are passed then it could be a formatting issue. All phone numbers should be at least 10 digits and we recommend they be separated by hyphens, though OpenCart may dictate how they are sent so this should not be your problem.

Similar to email addresses, it's possible that there's a formatting issue, but it's not likely. A valid email should be in the format "[name]@[domain].[tld]" where [name] is the address, [domain] is the website name, and [tld] represents the Top Level Domain of the website like "com" or "net."

More likely however is that you're attempting to run a test check and you're using your own information or information we have on file with your Green Merchant Account. Our system disallows you from using your own information as most banks would flag a check written from you, to you, as fraudulent causing you all sorts of issues! In order to protect our merchant accounts, we prevent this so if you must test, we suggest you use customer information or a dummy account.

## Cannot Create Checks Using Client's Routing and Account

As mentioned in the last section, you cannot use your own information to run checks into your merchant account! If you have to test, use a customer's information or some dummy info!

## Client ID Not Found or ApiPassword Supplied Not Correct

There are a few potential reasons for this set of errors:
1. The API credentials used are actually incorrect. Your API credentials are not the same as your Green Portal Login so make sure that you're using the correct things! The Client ID is a 6-7 digit number and your API Password is a 10-15 character alphanumeric string.
2. The API credentials are invalid. Any time a credential reset is requested, any existing API credentials are immediately invalidated so please make sure you are using the latest API credentials sent for each endpoint!
3. The credentials were copied and pasted incorrectly into the configuration. Some devices try to get "smart" when you copy and paste things by copying an additional space character before or after the word you have selected. This works great when you're pasting it into a text document, but not so great when you need exact values like a password! Make sure you have the exact values correctly copied and pasted with no additional characters.

# Some of my customers aren't able to check out because their routing and account are being denied for being Risky or Bad

This error at checkout is usually associated with a code like "RT00" and a description that lets them know how our verification system returned their information. If your customers are being denied then it is likely for a good reason!

Our verification service has three potential outcomes based on the status of the account. Firstly, it could just pass meaning our verification was successful and nothing bad was found. The second option means the account was found to be Risky. In this case either a bad transaction has been run at least once or potentially no information was known about the account. For risky accounts, our system is indicating that taking that check may be a higher risk than most regular accounts and this is why the default acceptance mode for our OpenCart plugin is Legacy mode! The third option is that the service returns the account was Bad and this is typically reserved for accounts which we know cannot process. In most cases this is because the account does not exist, has been previously flagged as fraudulent, or some other circumstance. Bad checks cannot be overridden.

In this case, your customers are receiving this error because either their account was Risky and your settings are on the Legacy mode which disallows them or their account was Bad! If you would like to take Risky payments, please see the Verification Mode section for information on how to change your mode to Permissive.