worldpay

Worldpay - Magento 2 Extension User Documentation Ver. q2.20.v2.3.4 - June 2020

1. Change Log

Release Version	Date	Description
1.2.2	Oct 27, 2017	 Direct Method Redirect Method MOTO Method Alternate Payment Methods Client Side Encryption (CSE) 3D Secure (3DS) Tokenization Saved Card Order Notification Merchant Profile Override Custom Payment Pages Order Cleanup Risk Guardian Data
1.3.0	Mar 6, 2018	 Magento 2.2.2 Support PHP 7.1 Support 3DS Cookie Issue resolved By Default 3DS enabled.
1.4.0	Mar 20, 2018	 Worldpay Instant Purchase Worldpay Instant Purchase With 3DS Enabled BugFix: Payment Method Title From Admin configuration Configurable Payment Order Description
1.5.0	Jun 25, 2018	Release phase 3 for Klarna
1.5.1	Jul 17, 2018	Capture for Klarna resolvedMinor fixes
1.5.2	Aug 20, 2018	Minor bug fixes
1.5.3	Oct 9, 2018	 Supporting Magento 2.2.5 Klarna bug fixes Magento EQP validation
1.5.4	Oct 10, 2018	 Magento package validation fixes Missed payment method images fixes
1.5.5	Dec 18, 2018	 Auto Invoice generation issue in direct mode for Credit Card Checkout blocker issue - if order contains virtual

	<u> </u>
	products / no shipping address3DS - empty saved card list issueOther minor fixes
May 14, 2019	Features: Google Pay Payment request API for Chrome Browser (Chrome Pay) Support Magento 2.3.0 Cron job for updating order status for failed order's
	 Bug Fixes: Support for debit card listing in Checkout page from Saved card lists Auto Invoice generation issue in P24 payment gateway Google address conflict issue Security issues Js issue if CSE (Client Side Encryption) is disabled Other minor issues
August 8, 2019	Features: • 3DS2 Support - Beta version
August 22, 2019	Features: • 3DS2 Support - Full version
September 13, 2019	Features: • IE 11 Support Bug Fixes: • Configuration settings issue for wallet • Month sorting issue in checkout Page • Other minor bugs
September 16, 2019	Bug fixes
September 19, 2019	Bug fixes
September 25, 2019	3DS2 Live support and Bug fixes
October 15, 2019	CSE library link changes
	August 8, 2019 August 22, 2019 September 13, 2019 September 16, 2019 September 19, 2019 September 25, 2019 October 15,

2.1.6	Jan 17 2020	 Partial Capture Support 3DS2 Iframe Support Stored Credentials Bug Fixes
2.1.7	Mar 2020	 Apple pay (岛) - Beta version Multiple Partial Capture CVV through HPP Stored Credential Disclaimer Google Pay Production Support Country Code Spoofing
q2.20.v2. 3.4	June 2020	Features: Recurring & Subscription Exemption Engine Magento 2.3.4 Compatibility Bug Fixes Apple Pay - Stable version

2. OVERVIEW

Magento is one of the leading Open Source ecommerce platforms in the market. Worldpay is a payment gateway provider that can be integrated with Magento to provide online payment service to end users.

To accept payment from customers using Worldpay payment gateway, Merchants, who are running Magento 2 based online store, would require a payment integration extension installed from Worldpay to integrate their Magento online store with Worldpay payment.

3. Prerequisites

Magento 2 or higher version application should be installed and configured properly.

4. Installation

Worldpay Extension is hosted at https://github.com/Worldpay/Worldpay-Magento-CG, To run below installation steps, access to repository is required.

Composer Based Installation

For installation of extension using composer, Please follow below steps:

 Run below code from command prompt at Magento installation root directory composer config repositories.repo-name vcs git@github.com:Worldpay/Worldpay-Magento2-CG.git

composer require sapient/module-worldpay

- 2. Run Setup Upgrade php bin/magento setup:upgrade
 - 3. Run Compilation php bin/magento setup:di:compile
 - 4. Finally clear cache php bin/magento cache:clean

Traditional Installation

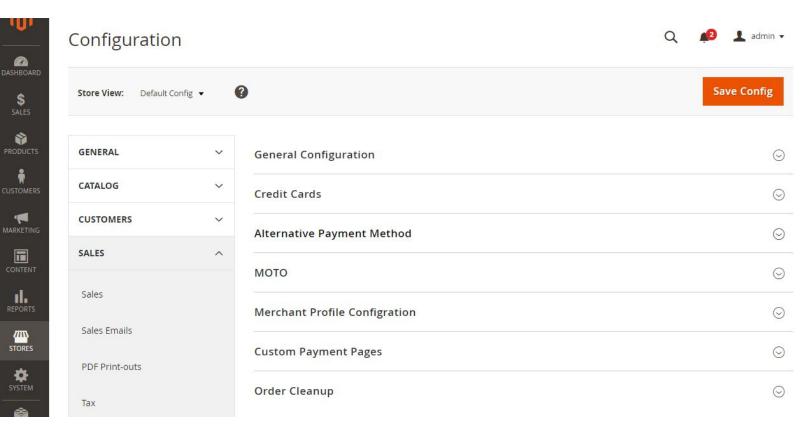
For installation of extension using traditional non-composer way, Please follow below steps:

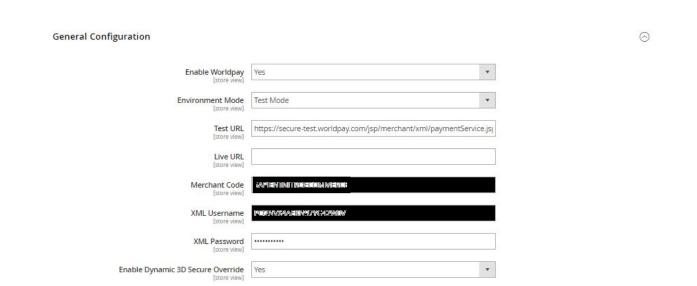
- Download the extension zip file from https://github.com/Worldpay/Worldpay-Magento-CG
- 2. Unzip the file in a temporary directory
- 3. Please cross check if there is any code folder under app folder path Magento2Rootfolder/app
 - a. If exist please upload it to your code directory.
 - b. If there is no code folder please copy the extracted folder to app/code/Sapient/Worldpay folder.
- 4. Disable the cache under System >> Cache Management
- 5. Enter the following at the command line: php f bin/magento2 setup: upgrade
- 6. Clear the cache from command line: php f bin/magento2 cache:clean Flush the cache from command line: php f bin/magento2 cache:flush

5. Configuration

After successful installation of extension, Please go to below Menu path to configure it.

Stores->Configuration->Sales->Worldpay



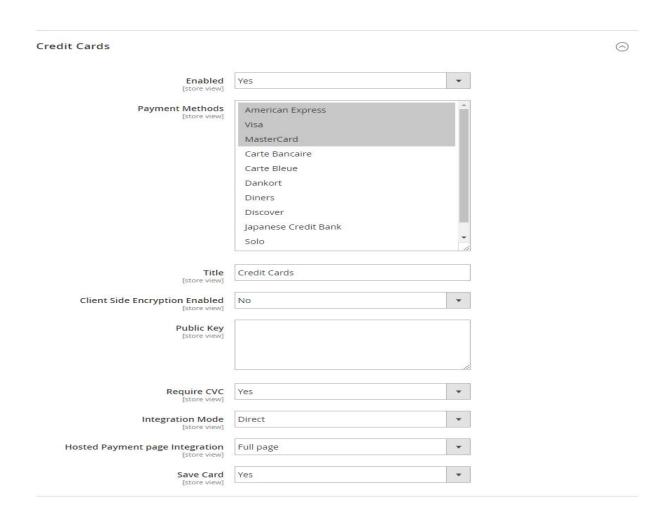


Configuration	Description
Enable Worldpay	If Set to "Yes" Worldpay payment method will be Available at checkout payment section
Environment Mode	Payment gateway, Test & Live Mode, On Production it should be set to Live mode.
Test URL	Worldpay Payment processing test URL
Live URL	Worldpay Payment processing Live URL
Merchant code	Global merchant code
XML username	Global XML username
XML Password	Global XML password
Enable Dynamic 3D Secure Override	Only applicable for Card payment with Direct Integration mode, If enabled request will be passed to Worldpay with 3D secure parameter
Do 3D Secure authentication	If enabled, 3DS supported cards will be validated by card issuer.
Enable Logging	IF enabled , all request & response along with other debug information will be logged at Magento2Root/var/log/worldpay.log file
Capture Invoice Automatically	If Set to YES: Invoice will be automatically created on Authorize response of worldpay and Capture request will be sent from worldpay. If Set to NO: Invoice will not be created, until capture order notification is received.
Payment Method Selection	It has two options :

Radio Button: APMs and Card Types will displayed a Radio button at payment section Dropdown: APMs and Card Types will displayed as Dropdown at payment section

Credit Card

This section contains configuration specific to credit card payments. Please check snapshot and detail below:



Configuration	Description
Enabled	If Set to "Yes" Credit Card payment method will be Available at checkout payment section
Payment Methods	Mutli-Select Credit card type selections. Selected CC types will be available as Radio/Dropdown option to customer at payment method section.
Title	Payment method title to be displayed at checkout payment section.
Client Side encryption	If enabled, all card details will be securely transferred to Worldpay in encrypted format.
Public Key	Only required if Client side encryption is enabled to encrypt card information securely.
Require CVC	If enabled CVC form field will be displayed to the customer at the card detail entry form.
Integration Mode	Plugin supports two integration types for Credit Card: 1. Direct Integration Mode: Card information will be captured at Magento2 online store and passed to worldpay from server to server transfer in XML format. No card information will be saved by the Worldpay plugin. 2. Redirect Integration Mode: User will be redirected to the Worldpay payment page and card information will be captured at worldpay end.

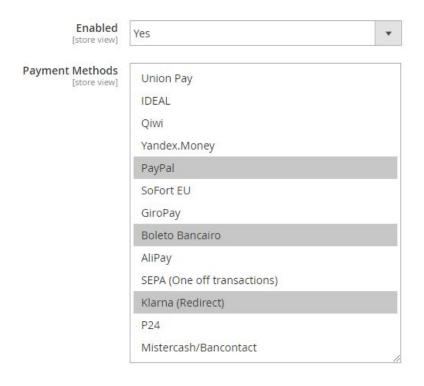
Hosted Payment Page Integration	 Only Applicable on Redirect Integration mode. Full Page: User will be redirected to the Worldpay payment page. Iframe: User will remain on Magento2 online store, but the worldpay payment page will be open in Iframe where customers can enter card information.
Save Card	If enabled, User will get an option to save card details. All Saved Cards can be managed at the user My Account section.

Alternative Payment Method

This section contains configuration specific to Alternative payment method. Only Redirect integration mode is available for alternative payment method.

Please check snapshot and detail below:

Alternative Payment Method



Configuration	Description
Enabled	If Set to "Yes" Alternative payment method will be Available at checkout payment section
Payment Methods	Mutli-Select APM selections. Selected APMs will be available as Radio/Dropdown option to customer at payment method section.
Title	Payment method title to be displayed at checkout payment section.

MOTO

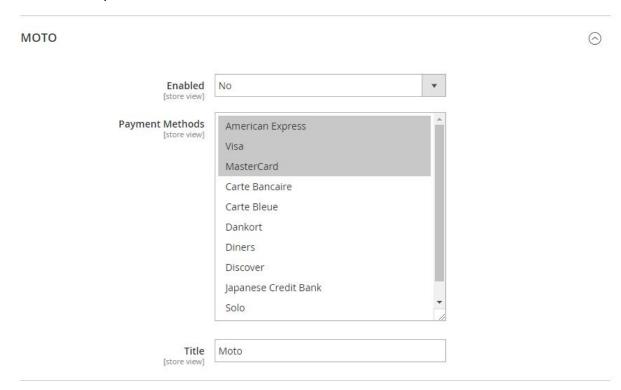
This section contains configuration specific to MOTO. Worldpay Mail & Telephone Order integration allows Admin user to create order from the Admin panel using the Worldpay

payment method. If enabled MOTO Credit card direct, Redirect & Saved Card payment method integration will be available as in Magento admin create order interface.

Current version does not support integration of CSE, 3DS with Credit card for MOTO orders.

Merchant profiles need to have Dynamic interaction type enabled at Worldpay to use MOTO orders.

Please check snapshot and detail below:



Configuration	Description
Enabled	If Set to "Yes" MOTO payment method will be Available at payment section of Admin order create
Payment Methods	Mutli-Select Credit Card selections. Selected credit cards will be available as Radio/Dropdown option to admin user at payment method section.

Payment method title to be displayed at the payment section.

Merchant Profile Override Configuration

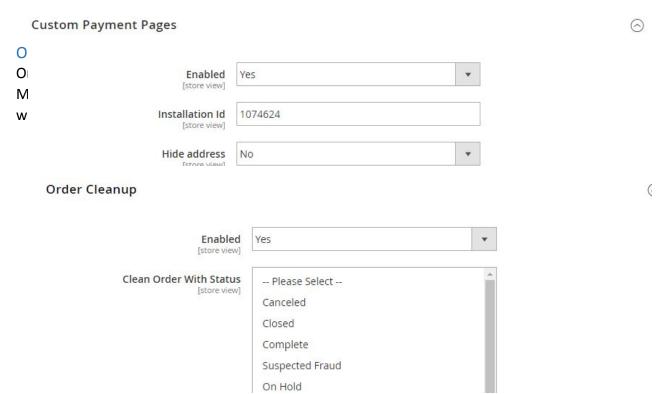
Merchant can override global value set for merchant profile at payment method level. If no override is set for a payment method, global merchant profile will be used for all transactions.

Please check snapshot below



Custom Payment Page

Custom payment page configuration is used in redirect method to provide merchant specific page installation id while redirecting users to Hosted page of Worldpay.



Configuration	Description
Enabled	If Set to "Yes" And Cron is correctly configured at the server. Order cleanup will auto cancel orders as per configurations.
Clean Order with Status	Mutli-Select Order status selections. Selected Orders will be fetched by order cleanup cron for cancellation.
Cancellation Time per payment method	Time in hour.

6. Invoice & Refund

Worldpay Magento 2 plugin allows invoice and refund with real time data synchronization with Worldpay payment gateway from Magento order manager.

Invoice

If Auto Create Invoice is set to "Yes" in configuration, Invoice will be generated as soon as Worldpay authorize response is received by Magento. Upon invoice creation, Order will be moved to processing status.

If Auto Create Invoice is set to "No" in configuration, No invoice will be created until 'Capture' Order notification is received. Order will remain in pending status until capture notification.

On capture notification received by Magento, Invoice will be generated and order will be moved to processing status, regardless of Auto create invoice setting.

Refund

Merchants can initiate a full or partial refund from Magento2 Order manager by creating credit memo for invoice generated orders.

If invoice is generated and transaction status of order is in 'Captured' State. Online refund option will be available in credit memo create interface of Magento.

On clicking the "Refund" button, Credit memo will be generated and a refund request will be initiated to Worldpay.

7. Order Notification

Plugin needs order notification to be setup to work properly. Order notification are transaction status updates pushed by worldpay to Magento2 store.

To receive Order notification , Below Order notification url is to be set in Worldpay merchant profile :

https://<brand url>/worldpay/notification/index

Where transactions are processed Asynchronously you may notice a detail of the transaction details being presented within Magento Order Details. Shortly after Magento receives the notification from Worldpay it will update the details to reflect the content.

8. Customisations

Change Order Code Format

The order code is created by the plugin and must be unique. It is possible to change the Order Code format by following these steps:

- Order code format can be changed by editing
 :sapient\module-worldpay\Model\PaymentMethods\AbstractMethod.php.
- In this file there is a function called _generateOrderCode(\$quote).
- Currently the order code format is Magento reserved order id current time (ex: 000001030-1515391128).

Error Code messaging

Error code messages are added in code and It is possible to change them by adding magento default translation CSV functionality.

- To add translation csv file in magento2, add a folder named: "i18n" inside module's folder

Then create a csv file with the name of language code.

for example:

for english (United state) => en_US.csv

french (canada)=>fr CA.csv

 Inside csv file you just need to add words which you want to translate, in following manner: "<word in english language>","<word in language to convert>"

for example:

"Add New Template", "Ajouter un nouveau modèle"

"Transactional Emails", "Emails transactionnels"

Back, Arrière

Reset, Réinitialiser

How to add a new payment method

It is possible to add a new payment method by...

- First, need to update etc/config.xml file, add required payment method information.
- Update etc/paymentmethods.xml file and mention the country which new payment method supports.

- Update etc/adminhtml/system.xml file to add new payment method settings to display/accessible it for admin configuration part.
- Add the new payment method front end code to display it in the payment methods section of the checkout process.
- Create a new payment method file in Model/PaymentMethods/ folder to call the payment functionalities (refer: CreditCards.php, Moto.php, AlternativePaymentMethods.php).
- Create an authorization service file in Model/Authorisation/ folder based on payment method type.
- The Authorization service is responsible for collecting payment data, Worldpay payment requests and handling Worldpay payment responses.

How to display Images/Icons as the payment method

Payment method image/Icons are displayed according to the image stored in \sapient\module-worldpay\view\frontend\web\images\cc. to add/update icons need to paste the required icon/image file in this folder by naming it exactly as payment type code.

For example: to update Mastercard icon add image file and name it as "ecmc-ssl".

9. Reporting a bug

Please do this via github.

10. Instant Purchase

Instant Purchase feature is one click checkout button placed on product detail pages. On clicking this button, Magento places order using the default shipping, billing address, and last stored payment method from logged in user. Once the order is placed, an order confirmation message appears in the notification area.

Worldpay extension for Magento 2 supports Instant purchase if logged in customer has a default billing, shipping and saved card.

Prerequisites To display Instant Purchase Button:

• Instant purchase enabled for a store at Store / Configurations / Sales / Sales / Instant Purchase

- Customer is logged in
- Customer has a default shipping and billing address defined.
- Customers have valid stored Credit Cards with Worldpay Payment.

How Instant Purchase Work with Worldpay

- Instant purchase works as a new payment method from backend called worldpay cc vault.
- config.xml contains a new worldpay_cc_vault payment method and its title, payment_action, instant purchase availability, token formatter and additional information.
- Once a customer places an order with the "Save This Card" option, Card details will be saved in Magento vault by Worldpay extension.
- After saving the card details in Vault, Customer session data loaded with saved card details for Instant Purchase.
- On product details page Instant Purchase Button displayed by checking the default shipping, billing address and cheapest shipping methods availability.
- On clicking the "Instant Purchase" button, Order is placed with Magento 2.2 Instant purchase module and uses the Worldpay payment method (worldpay_cc_vault) as payment gateway.

Please note Instant Purchase Integration is not enabled by default. If the payment method meets all the requirements listed, you can enable Instant Purchase

Stores->Settings->configuration->Sales->sales->Instant Purchase.

Above setting Enable Instant purchase globally, for Worldpay module specific you need to enable from Stores->Settings->configuration->Sales->Worldpay->Credit Cards->Enable Instant Purchase.

Instant purchase with 3DS

Worldpay support for Instant purchase checkout even with 3ds is enabled for a card. It is possible by suppressing 3ds for only IPC transactions.

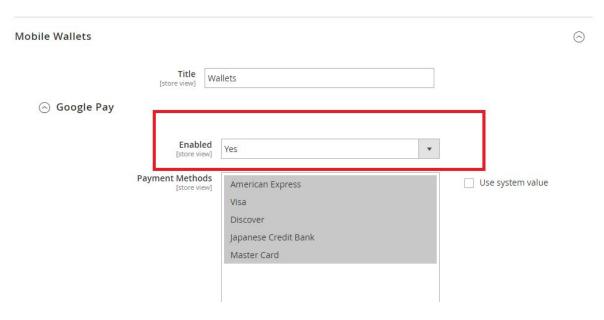
11. Google Pay

Google Pay lets your customers pay with the press of a button — using payment methods saved to their Google Account.

How to Enable?

In admin, configurations are available to enable/disable this feature.

Admin \rightarrow Stores \rightarrow Configuration \rightarrow Sales \rightarrow Worldpay \rightarrow Mobile Wallets Here, enable the Google Pay option.



Below are the configuration needs to be saved,

Gateway name: worldpay

Gateway Merchant Id: Merchant id will be provided by WorldPay.

Google Merchant Id: Generated Google merchant Id in your Google Merchant Account

Google Merchant Name: Can be configured in your Google Merchant Account.

Gateway Name [store view]	worldpay
Gateway MerchantId [store view]	xxxxxxxxxx
Google MerchantId [store view]	уууууууууу
	This field only required for production mode. This can be generated from merchant's Google account
Google MerchantName [store view]	test

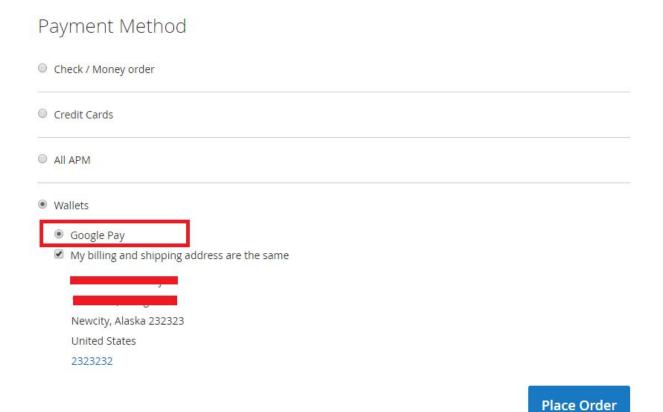
You can find the option to change the environment i.e. *Test / Production* in the General Configuration Section.

General Configuration



How will it work?

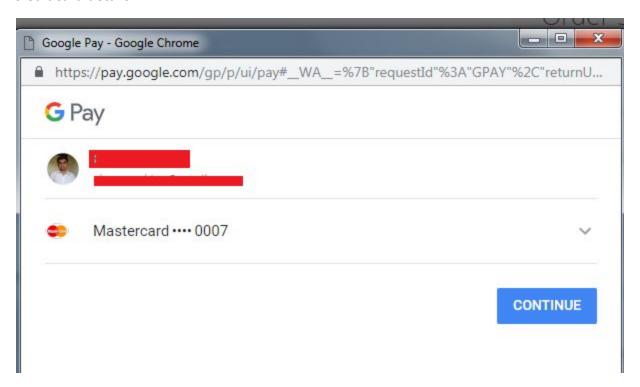
You can see the Google Pay option in checkout page like below, once it is enabled,



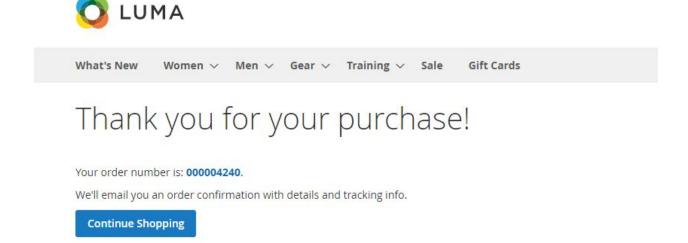
20

Once you click the Place order button you can see the saved card details from Google account if you already signed in Google account. If not then, Google will ask to sign in.

If you don't have a saved card from your google account, then you have to enter debit / credit card details.

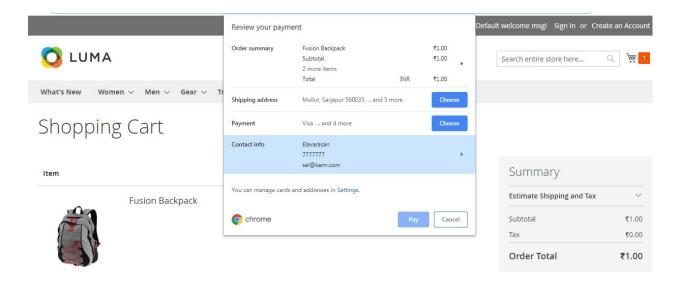


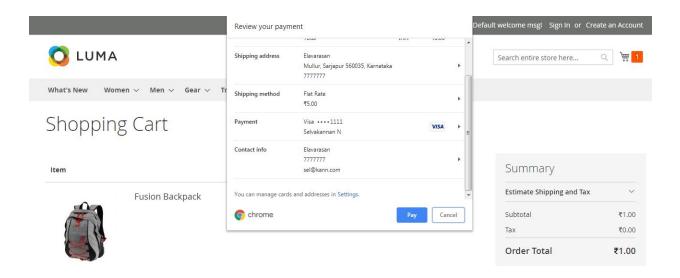
If the payment is approved by Google and Worldpay then the success page will be showed up.

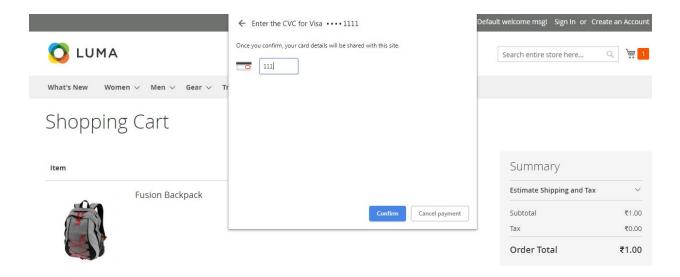


12. Payment Request Api for Chrome Browser (Chrome Pay)

The purpose of this feature is to fast up the checkout process. It will collect saved data from the browser (only for Chrome now) and it will show in the checkout forms i.e. Shipping and billing address, Saved debit / credit card details. Every action will happen in one popup window. i.e. One-page checkout

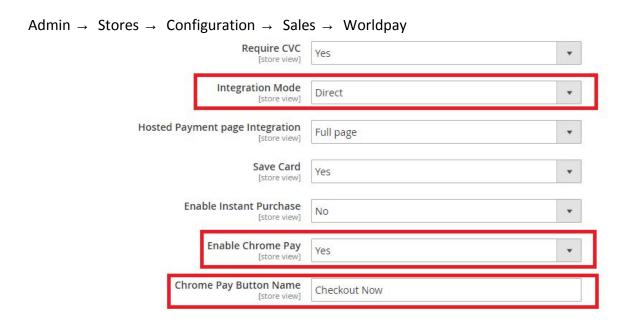




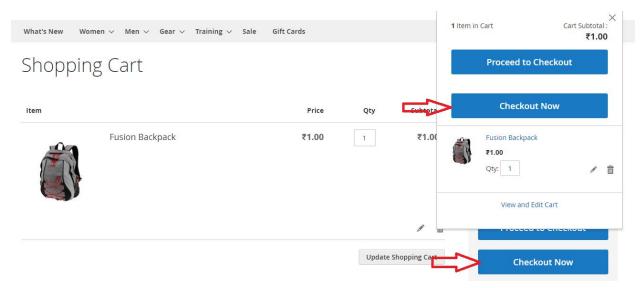


How to Enable?

In admin, configurations are available to enable/disable this feature.



Enable the Chrome pay option in the above path. Chrome pay will work on only with **Direct mode**. And the button name is configured from admin. i.e. Checkout Now. Once it is enabled then the button will be available in mini-cart and cart page (Magento cache needs to be cleared)



That button will initiate the Chrome Pay functionality (the pop up).

13. Cron jobs

Some orders are not getting updated as expected in Magento admin **occasionally**. So setting up a cron will help to update those orders. It will take all orders i.e. Direct, Redirect, APM & MOTO which is placed from last 24 hrs. and will sync with Worldpay server. It will not take cancelled orders.

a. How to set up?

By default, Magento has a lot of default cron groups. We can run all cron groups and we can run single groups as well. To avoid running all groups we have created separate group i.e. **worldpay_orders** to update worldpay orders.

Run the below command to execute the script to update the orders,

php bin/magento cron:run --group="worldpay orders"

Once the execution is done you can see the results in the CLI screen.

```
31-28-8:/var/www/html/webroots php bin/magento cron:run --group="worldpay_orders"
                                                                                                             Time
agento@ip-172-31-28-8:/var/www/html/webroot$
                                                  % Total
                                                              % Received % Xferd
                                                                                   Average Speed
                                                                                                                       Time Current
                                         Upload
                                                                     Left Speed
                                                   Total
                                                            Spent
100 2678
                                                 0:00:01
                                                                            Current
 % Total
             % Received % Xferd
                                  Average Speed
Dload Upload
                                                   Time
                                                            Time
                                                   Total
                                                            Spent
                                                                            Speed
               1313 100
                                                            Time
                                                   Time
                                                                            Current
 % Total
                                         Upload
                                                   Total
                                                            Spent
     929 100
                 465 100
                             464
```

b. Configure cron in periodic time

To schedule this cron job in periodic time, you need to setup cron in your server. There are multiple ways to setup cron on a server. Below is one example.

Below is the command line to configure cron,

Crontab –e

Add the following lines to your cron file (add your php.ini file path inside)

```
*/1 * * * * php -c {php.ini_path} {magento_path}/bin/magento cron:run --group="worldpay_orders"
```

Above line will execute the script every 1 min. You can adjust as per your requirement.

14. 3DS2 Configuration

3DS Flex is the most advanced product on the market for 3-D Secure (3DS). It combines the new standard of 3DS2 with traditional 3DS allowing for a single integration.

To make use of the benefits of 3DS Flex you must enable and configure 3DS2. This guide will provide steps on how to achieve this,

Login to Magento Admin \rightarrow Stores \rightarrow Configuration \rightarrow Sales \rightarrow Worldpay

Under General Configuration you can see 3DS2 configuration like below,

Enable Dynamic 3DS2 Secure Override [store view]	Yes	٠
JWT Event URL [store view]	https://secure-test.worldpay.com	
	For Live Use Cardinal Commerce URL, For Test Use https://secure- test.worldpay.com	
JWT Api key [store view]		
JWT Issuer [store view]		
Organisational Unit Id [store view]		
Test DDC URL [store view]	https://secure-test.worldpay.com/shopper/3ds/ddc.html	
Production DDC URL [store view]	https://centinelapi.cardinalcommerce.com/V1/Cruise/Collect	
Risk Data [store view]	Yes	*
Authentication Method [store view]	ThirdParty Authentication	*
Test Challenge URL [store view]	https://secure-test.worldpay.com/shopper/3ds/challenge.html	
Production Challenge URL [store view]	https://centinelapi.cardinalcommerce.com/V2/Cruise/StepUp	
Challenge Preference [store view]	Challenge Requested	*
Challenge Window Size [store view]	Full Page	*

The above image has the sample values for the required parameter to configure 3DS2 feature. Please clear the Magento cache once configuration is updated.

Detailed explanation for the above fields:

Enable Dynamic 3DS2 Secure Override:

This is to enable or disable the 3DS2 feature. If 3DS2 is disabled, order will be placed by 3DS (if 3DS is enabled). If both are disabled then order will be placed by normal credit card authentication.

Jwt Event URL:

It is for capturing the session id from domain. For **Production Mode** please use below value,

https://centinelapi.cardinalcommerce.com

For test mode please use below value,

https://secure-test.worldpay.com

JWT Api key, JWT Issuer, Organisational Unit Id:

You will get those values from Worldpay.

Test DDC (Device Data Collection) URL:

It is for creating JWT session id. Use below value for this field for test mode,

https://secure-test.worldpay.com/shopper/3ds/ddc.html

Production DDC URL:

Use below value for Production mode,

https://centinelapi.cardinalcommerce.com/V1/Cruise/Collect

Risk Data:

If this is enabled, the plugin will provide additional information to Worldpay to increase the chances that the shopper won't be challenged.

Authentication Method:

This is Optional for now (latter use).

Test Challenge URL:

This is the url for challenge page. Please use below value for test mode,

https://secure-test.worldpay.com/shopper/3ds/challenge.html

Production Challenge URL:

Please use below value for production mode,

https://centinelapi.cardinalcommerce.com/V2/Cruise/StepUp

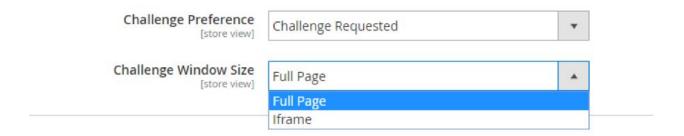
Challenge Preference:

This is Optional for now (latter use).

Challenge Window Size:

In general, 3DS2 challenge form will redirecting to either full page or Iframe based on request.

In Magento with Worldpay Plugin we implemented challenge window size with Full Page / Iframe options. It will set the challenge page by choosing this option in admin Worldpay Configuration. If it is "Full Page" challenge page redirect to either Worldpay / Cardinal. If it is "Iframe" challenge form remains in the same page.



The above screen shot is having the entire configuration related to 3DS2. And please note that the 3DS2 feature will work only with **Direct mode** (you can see the mode configuration on the same page under Credit Cards section) below is the screenshot for your reference,



Below configuration, also always needs to be enabled for 3DS2, i.e. **Do 3D Secure** authentication.



However if you disabled the 3DS1 i.e. **Enable Dynamic 3D Secure Override**, then **Do 3D Secure authentication** option will disappear (it will not be visible) but make sure that **Do 3D Secure authentication** option is enabled always.

My Account Saved Card (Exception):

Cards, which had been saved before 3DS2 version, please update the saved card from My Account section.

My Saved Card

Card Brand #	Card Number	Card Holder Name	Card Expiry Month	Card Expiry Year		
VISA	4111*******1111		4	2022	Update	Delete
ECMC	5555*******4444		4	2022	Update	Delete

15. Save Card

Customer card details will be processed by using the below mechanism. Customer card details will not be saved on the Magento side.

1. Tokenization:

For token based authentication, a token with expiry time gets created by Worldpay and saved within Magento database. Customers need to save the card again once the token gets expired and a new token will be generated by Worldpay.

Tokenization will be enable / disable in admin configurations under Credit card section,



2. Stored Credentials:

This is also a token based authentication where a token with long expiry time gets created by Worldpay and saved within Magento database. This authentication is useful for recurring orders.

Stored Credentials will be enable / disable in admin configurations under Credit card section,



Note:

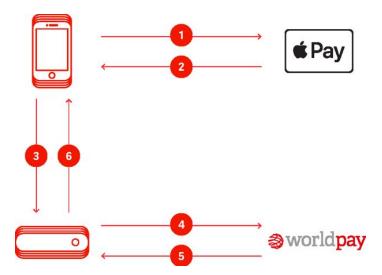
If both are enabled then card will be processed / saved by using both methods.

16. Apple Pay - Production Support

Introduction

Apple Pay is a mobile payment and digital wallet service by Apple Inc. that allows users to make payments in person, in iOS apps, and on the web. It is supported on the iPhone, Apple Watch, iPad, and Mac. Worldpay supports Apple Pay only on web applications.

How it works?



- Magento request the encrypted payload from your website
- Apple Pay returns the encrypted payload following shopper authentication
- Magento send the encrypted payload to your server
- Magento send an XML Direct request to Worldpay containing the encrypted Apple Pay data
- Worldpay send the payment response to Magento
- Plugin in Magento inform the shopper of the outcome

Prerequisites

To enable Apple Pay for your customers, you need to have:

- An <u>Apple Developer account</u> that is associated with either the <u>Apple Developer Program</u>, or the <u>Apple Developer Enterprise Program</u>.
- Worldpay Merchant account.

Your customers can only see Apple Pay as a payment method option if they:

- Use an Apple Pay-compatible device.
- Use <u>Safari</u> if they are paying on the web.
- Located in a country or region where Apple Pay is available.

Implementation Steps:

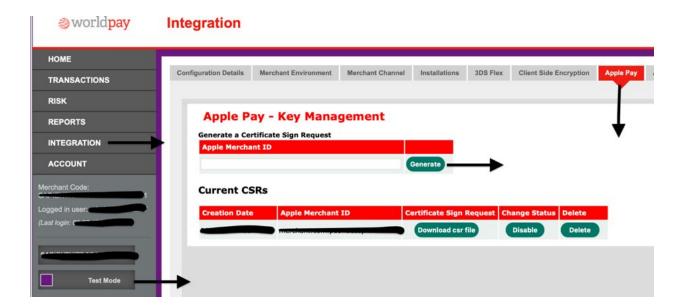
You have to follow below steps to implement Apple Pay,

- 1. Create your merchant identifier.
- 2. Enable Apple Pay capabilities.
- 3. Create a payment processing certificate.
- 4. Register and validate your merchant domain with Apple.
- 5. Create a merchant identity certificate.

1. Create your merchant identifier:

Login to the developer account and follow the Apple Developer Account Help instructions to create a merchant identifier

Once you created the merchant identifier i.e. *merchant.com.worldpay.merchantAccount* login to your Worldpay Merchant account.



Then switch to your Mode (Test or Production) -> Select Integration from left side Menu -> Select Apple Pay in the top -> You can see the above screen shot as a page.

Put that Merchant Identifier you created in Apple in the above field and click the Generate button. Now you can see the CSR that you generated. Download that file. This will be required to create a payment processing certificate.

2. Enable Apple Pay capabilities

Follow the Apple Developer Account Help instructions to enable Apple Pay

3. Create a payment processing certificate

Follow the Apple Developer Account Help instructions to <u>create a payment processing</u> <u>certificate</u>, but note the following:

- In the step to select a merchant identifier, make sure you select the merchant identifier you created in Step 1.
- Skip the step to create a certificate signing request.
- In the step to select the certificate signing request file, select the CSR you generate from us in Step 1.
- Download and save the generated payment processing certificate (.cer file).

When you have completed the instructions from Apple, send that payment processing certificate you downloaded to Worldapy.

Wait until Worldpay confirms that the certificate is activated.

4. Register and validate your merchant domain with Apple

Follow the Apple Developer Account Help instructions to <u>register a merchant domain</u>, but note the following:

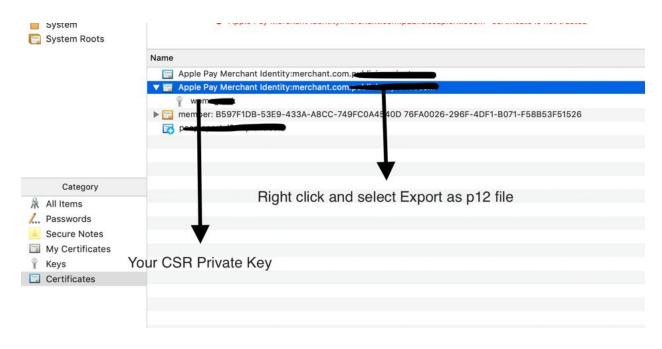
In the step to select a merchant identifier, make sure you select the merchant identifier you created in Step 1.

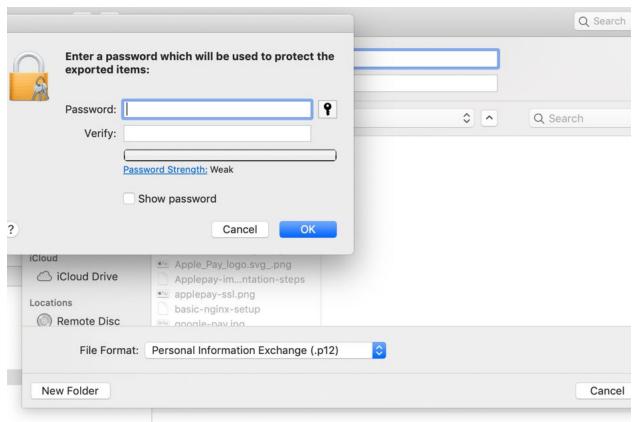
5. Create a merchant identity certificate

For each transaction you have to request and maintain a session from Apple by using your Merchant Identity Certificate.

Follow the Apple Developer Account Help instructions to <u>create a merchant identity certificate</u>, but note the following:

- In the step to select a merchant identifier, make sure you select the merchant identifier you created in Step 1.
- Follow the instructions from Apple to create a CSR yourself. The CSR you generated from Worldpay can't be used for creating a merchant identity certificate. So, generate CSR of your own and use that to generate the Merchant Identity Certificate.
- Download and save the generated Merchant Identity Certificate (.cer file).
- When you have completed the instructions from Apple, add the merchant identity certificate to your keychain.
- While you creating CSR of your own you might get Private key also. Add that file too in your KeyChain App.
- Export the certificate from your keychain as a p12 file.





- Note the password which you have been asked in above step.
- Now you have xxxxx.p12 file and we have to convert the p12 file to a PEM files using the following command:

openssl pkcs12 -in ApplePayMerchantIdentity_and_privatekey.p12 -out ApplePay.crt.pem -clcerts -nokeys

openssl pkcs12 -in ApplePayMerchantIdentity_and_privatekey.p12 -out ApplePay.key.pem -nocerts

- While generating these files you may asked for the password. Please use the password which
 you used in the previous step. Upload both files to your server.
 Eg. /var/www/html/apple-certs/
- Use the below commands to verify the files,

openssl x509 -noout -modulus -in ApplePay.crt.pem | openssl md5 openssl rsa -noout -modulus -in ApplePay.key.pem | openssl md5

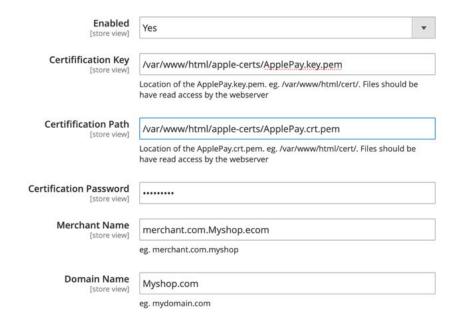
- The output of both commands should be the same. Below is the reference.
- If the output of both commands is not the same then some where you have miss configured in above steps. If it is the same then you have done all setups to enable the Apple Pay.

Magento Configurations:

Go to Magento Admin -> Stores -> Configurations -> General -> Sales -> Worldpay

You can see the Apple Pay configuration in the Wallets section. Fill and save it. Now you can see the Apple Pay payment option on the Checkout page.

Apple Pay

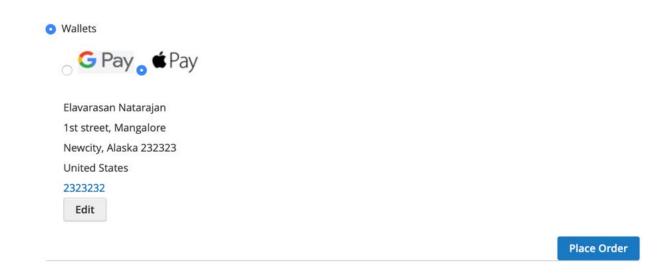


Certification Key: Path of the certification key (pem) file in the server

Certification Path: Path of the certification crt (pem) file in the server

Merchant Name: Merchant Id which you generated in Apple Developer account

Domain Name: Registered domain name with Apple



17. Multiple Partial Capture

Introduction:

Worldpay supports (multiple) partial payment capture for Credit Card orders, Wallet Orders and few APM also.

In general, a payment can only be captured once. This also applies to partial captures. If you make a partial capture, the rest of the authorization is cancelled and, to capture the remaining amount, you must submit a new order to our Payment Service for authorization.

By default, Worldpay Supports partial capture one time only. For multiple partial captures you have to request Worldpay to enable Multiple Partial Capture for your account.

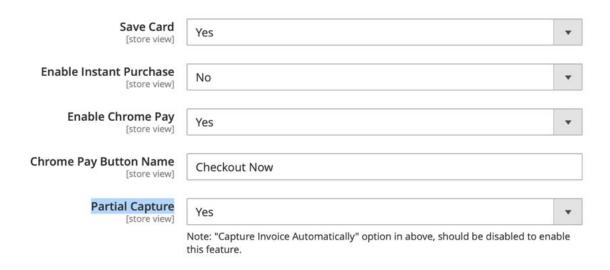
How it works in Magento?

In Magento with Worldpay Plugin we implemented Partial Capture with Enable / Disable options. It can be simply enabled by choosing this option in admin Worldpay Configuration. If it is disabled Partial Capture request will be sent to Worldpay.

You can see the Partial Capture Option in below location,

Admin -> Stores Configuration-> Sales -> Worldpay.

Under the "Credit Cards" end section you can find the Partial Capture option.



However, we need to **disableAuto Invoice Feature** to make this work as mentioned in the above screen shot in the "Note" section. Otherwise the capture request (Fully Capture) will send to Worldpay once the order has been placed in Magento.

And if the order i.e. Payment is already in Captured status in Worldpay, then Partial Capture is not possible. You will get an error message like "Partial Capture is not possible. The Payment is already Captured".

Partial Capture can be done only if the Payment is in Authorization status in Worldpay.

Note:

If Partial Capture is disabled and still if you try to do the Partial Capture then full Capture Request will be sent to Worldpay.

Will Support APM & Wallets?

Not all APM's (Alternative Payment Methods) support Partial Capture. Below is the APM & Wallet list which will support Partial Capture.

APM:

1. PayPal

Wallets:

- 1. Apple Pay
- 2. Google Pay

18. CVV through Hpp

Introduction:

Worldpay supports CVV through HPP for Credit Cards as PCI DSS regulations, the CVV is not stored with the token details. However, you can optionally submit the CVV for checking card through HPP.

How it works in Magento?

For CVV through HPP, on selecting a saved card we are redirecting to HPP with saved card token. In HPP users can conform their CVV and proceed for the transaction. In addition to this user can change to other card options which are available in HPP itself without redirecting to the checkout page.

Admin Configuration located in Admin -> Stores Configuration-> Sales -> Worldpay-> Credit Cards.



End User Interaction Flow:

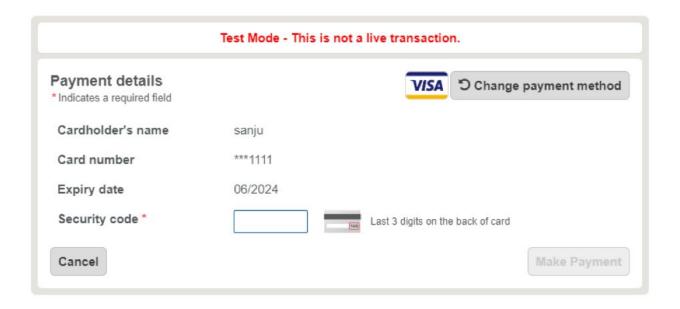
• On click of Use Saved card

End user can view all the saved cards and select the card from the saved cards list and click on place order.



User will redirect to HPP page as shown below based on the selected card.

• HPP window with saved card token

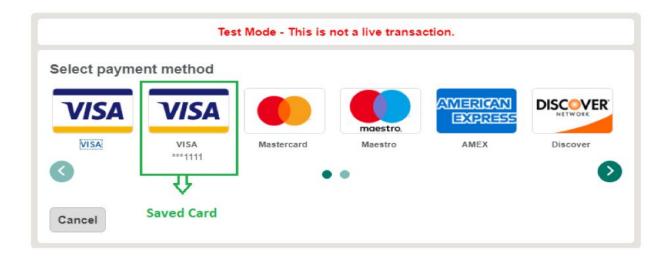


"Make Payment" option will be visible once the user entered the cvv as below.

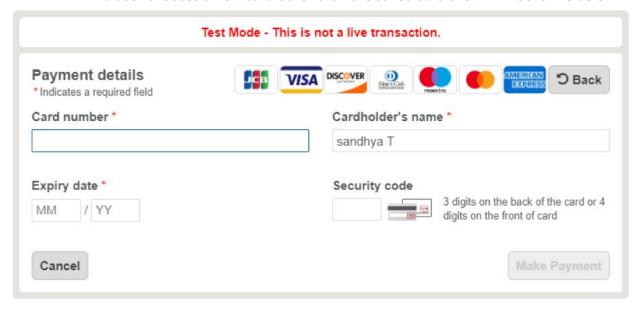


• On click of Change payment method in HPP

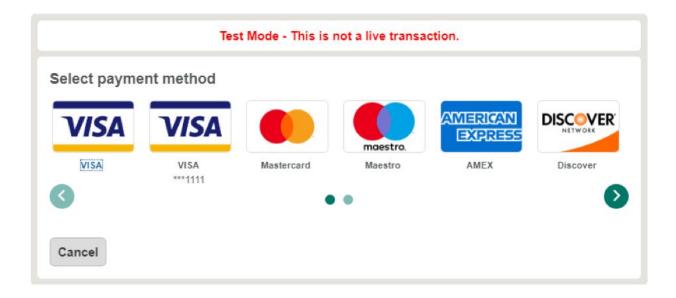
Users will get other cards including saved card which are available in HPP and user can choose any of the card to make payment.



1. If End user chooses a new card other than the saved card then HPP looks like below.



On clicking the "Back" button user will get all the cards available screen in HPP.

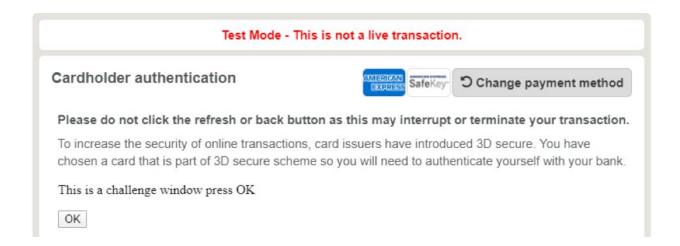


End User can choose again saved cards from the HPP and can make the payment.

3DS2 with Redirect HPP



Once the end user entered CVV and click on make payment, then 3DS2 challenge window will open in HPP itself to confirm.



After confirming the challenge page, the order will place and redirect to the order success page.

19. Stored Credentials Disclaimer

Introduction:

Worldpay supports stored credentials for Credit Cards to comply with scheme mandates for storing (and subsequently using) card payment credentials for cardholder and merchant-initiated transactions.

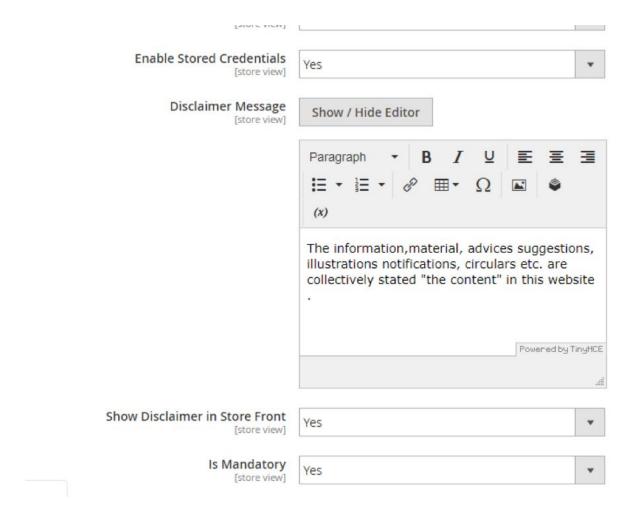
How it works in Magento?

For stored credentials we are providing an option to show disclaimer message. To show a disclaimer message, the merchant has to select the show/hide disclaimer button and enter the disclaimer message in the editor window.

In addition to this merchant has options to choose

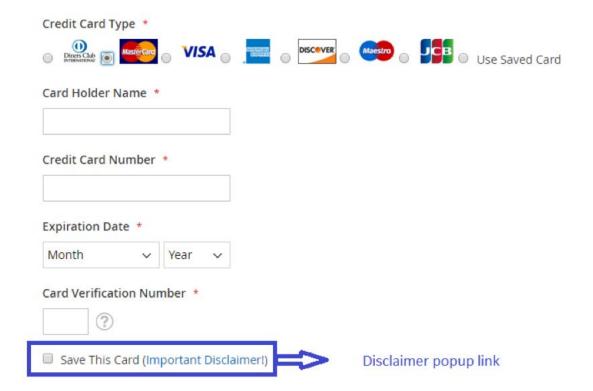
- "Show disclaimer in store front" On selecting "Yes" the disclaimer pop up link will be shown to the end user.
- "Is Mandatory for store view" On selecting "Yes" the end user has to agree with the disclaimer pop up message to place the order and to save the credit/debit card details.

Admin Configuration located in Admin -> Stores Configuration-> Sales -> Worldpay-> Credit Cards.

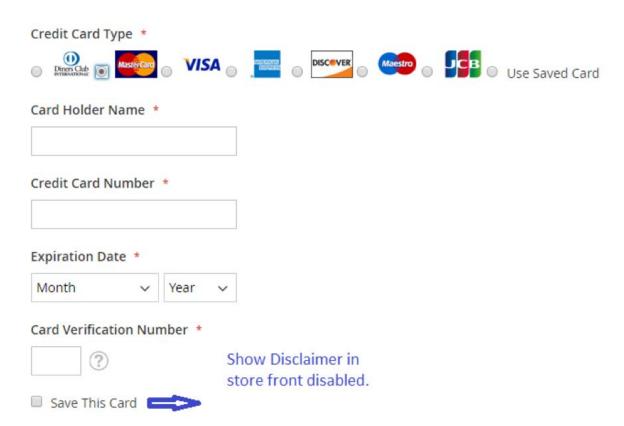


End User Interaction Flow:

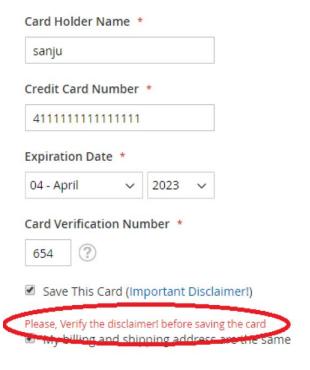
• Show disclaimer in store front enabled



• When disable disclaimer in store front



- When "important disclaimer mandatory" is enabled
 - 1. End users should choose any of the options (Agree/Disagree) to proceed place order otherwise an error will throw like below.



1. If the end user choose "Agree" option then card details will save and order will be placed.



1. If the end user chooses the "Disagree" option then card details won't be saved and save card checkbox becomes unchecked but order will placed.

- When "important disclaimer mandatory" is disabled
 - 1. If the end user opens the disclaimer and chooses the "Agree" option then card details will be saved and order will be placed.
 - 2. If the end user chooses the "Disagree" option then card details won't be saved and save card checkbox becomes unchecked then order will be placed.
 - 3. If the end user didn't open disclaimer or didn't choose any option then it will take it as "Disagree" and card details won't be saved but order will be placed.

Note: If a user disagrees the card details won't be saved even though stored credentials is enabled.

20. Country Code Spoofing

Introduction:

Worldpay plugin provides payment methods based on Country code. If any of the country codes are refused by Worldpay gateway then payment methods won't appear in the checkout page. To overcome this Worldpay introduced a country code spoofing option where merchants can override refused country code with mapping country code.

How it works in Magento?

By default magento having the countries list, based on the shipping address country code Worldpay will fetch the payment methods. As Worldpay Plugin is not supported for few countries like (Jersey-JE, Isle of Man-IM), we introduced country code spoofing where merchants can provide the refused country code and mapped country code. Based on the mapped country code Worldpay plugin will fetch the payment methods and process the order flow.

Admin Configuration located in Admin -> Stores Configuration-> Sales -> Worldpay-> General Configuration.

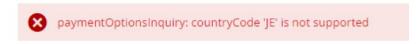
Country Codes [store view]

JE-GB,IM-GB

Note: Map the refused country code with accepted country code. e.g. JE-GB, JE (Jersey) is refused country code by worldpay and it is mapped to GB (Great Britain).

End User Interaction Flow:

• When country code is refused by Worldpay



Payment Method

- Check / Money order
- Credit Cards
 - Save This Card (Important Disclaimer!)
 - After replacing of refused country code with mapped country code

Payment Method

- Check / Money order
- Credit Cards



















Save This Card (Important Disclaimer!)

Now end users are able to see payment options even by selecting the shipping country code which is rejected by Worldpay as merchant has provided mapping country code for refused country codes.

Note:

Merchant should pass the refused country code and mapped country code in the format of JE-GB where JE (Refused country code), GB (Mapped country code). For multiple countries should separate by comma (,) [Ex: JE-GB, IM-GB].

21. Exemption Engine

Introduction:

The Exemption Engine maximizes a frictionless checkout by using transactional data to predict issuer behavior.

Request real-time risk analysis of transactions to exempt as many as possible from <u>SCA</u>

Implementation:

To enable EE in Magento go to admin -> Stores -> Configuration -> Sales -> Worldpay. Under Credit Cards section you can see the EE configuration as below,



Please select the options as above as for Production environment. You can simply disable the feature by selecting disable option as shown above.

Placement:

Optimised:

Worldpay Suggests to use Optimised placement for Production Environment.

To test the Exemption Engine, you can use different **Placement And Types As** per the documentation from Worldpay (Only in test environment)

Authentication:

Can be used only for test mode.

Autherisation:

Can be used only for test mode.

Documentation:

https://developer.worldpay.com/docs/wpg/scaexemptionservices/exemptionengine

22. Subscription & Recurring

Introduction:

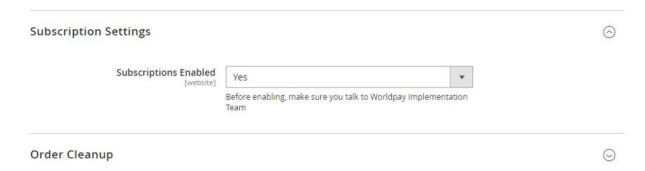
Worldpay introduced a new feature as Recurring payments, also known as Subscription Payments, allow customers to automatically pay a subscription price for a product or service. The Recurring Payment or Recurring Engine is a managed service that relieves the burden of developing an in-house billing solution for merchants engaged in recurring transactions. This powerful but flexible service allows you to create virtually any payment plan required by your business model.

How it works in Magento?

The first step in setting up recurring billing on the Worldpay eCommerce platform is to establish one or more payment plans.

1. Enable Subscription

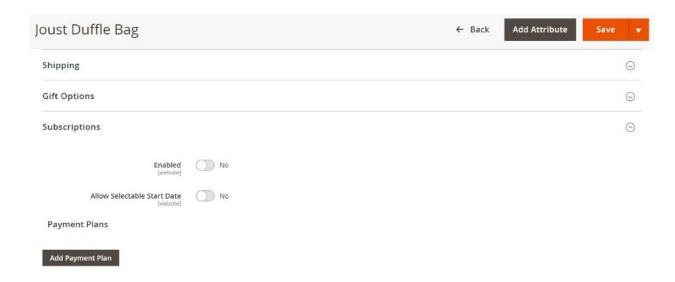
Configuration located in Admin -> Stores Configuration-> Sales -> Worldpay-> Subscription Settings.



2. Add new Payment Plan

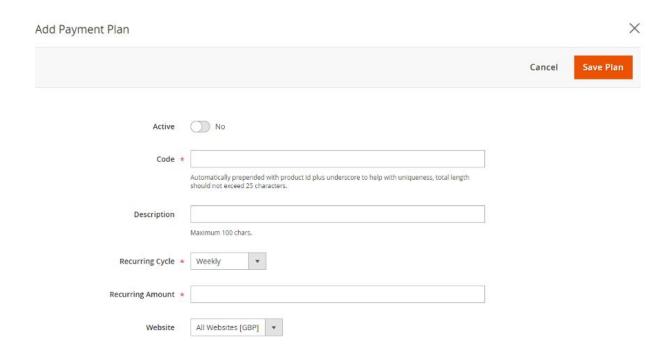
To use recurring payments, create a Payment Plan for a product:

- Step 1: Login to the Admin Dashboard as a Magento admin user
- Step 2: Go to "PRODUCTS → Catalog" page
- Step 3: Open the product you want to set a payment plan for
- Step 4: Switch to the "Subscriptions" tab:

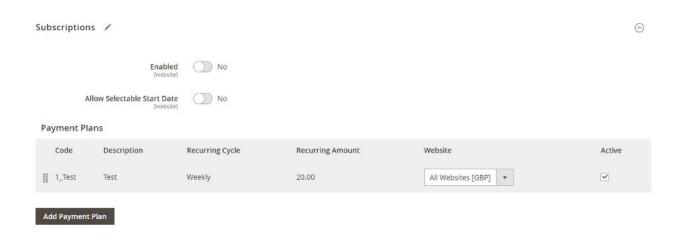


The following configuration is available for managing Payment Plans:

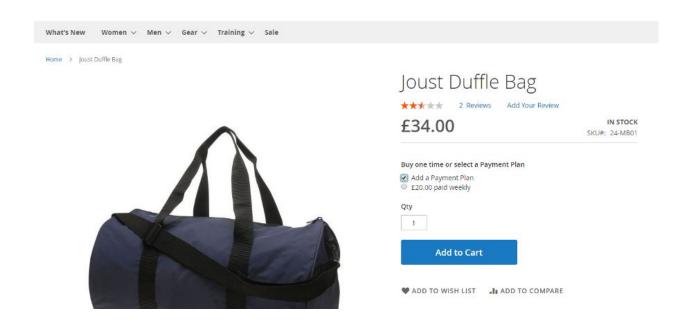
- a. Enabled enables or disables Payment Plan for products
- b. Allow Selectable Start Date if set to "Yes" a customer can select the start date of a recurring payment
- c. Add Payment Plan button
- Step 5: Click the "Add Payment Plan" button
- Step 6: Payment Plan Entry Form is displayed with the following fields:



- 1. Active enables or disables current Payment Plan for product
- 2. Code unique ID of Payment Plan
- 3. Description description of Payment Plan
- 4. Recurring Cycle type of period: Weekly/Monthly/Quarterly/Semiannually/Annually
- 5. Recurring Amount cost of Subscription
- 6. Website storefront which will be available Payment Plan
- 7. Save Plan and Cancel buttons



- Step 9: Set "Enabled" to "Yes". Save the product by clicking the "Save" button.
- Step 10: Return to your storefront to verify that the Payment Plan is shown for the customer.
- Step 11: Open the product which has a payment plan(s).
- Step 12: Select the "Add a Payment Plan" checkbox.



3. Activate/Deactivate Payment Plan

You can active/deactivate payment plans in Admin:

- Step 1: Login to the Admin Dashboard as a Magento admin user
- Step 2: Go to "PRODUCTS → Catalog" page
- Step 3: Open the product you want to set a payment plan for
- Step 4: Switch to the "Subscriptions" tab
- Step 5: Select/Unselect checkbox in Active column for payment plan
- Step 6: Save the product
- Step 7:

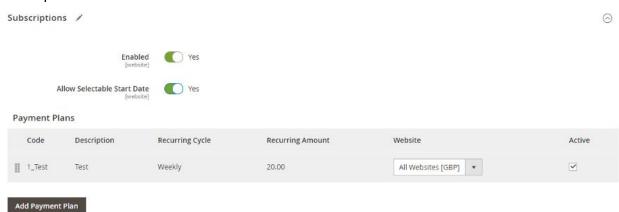
Return to your storefront to verify that the Payment Plan is shown for the customer

- Step 8: Open the product that has a payment plan(s).
- Step 9: Select the "Add a Payment Plan" checkbox:
 - a) Payment Plan doesn't appear if it was deactivated
 - b) Payment Plan appears if it was activated

4. Allow to specify a start date

You can allow the user to specify a start date for their subscription:

- Step 1: Login to the Admin Dashboard as a Magento admin user
- Step 2: Go to "PRODUCTS → Catalog" page
- Step 3: Open the product which you want to set a payment plan for
- Step 4: Switch to the "Subscriptions" tab
- Step 5: Set "Allow Selectable Start Date" to "Yes"



- Step 6: Save the product.
- Step 7: Return to your storefront to verify that the Payment Plan is shown for the customer

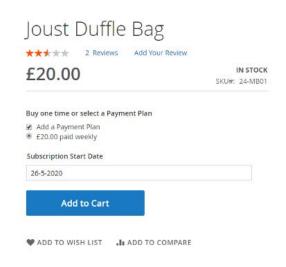
Home > Joust Duffle Bag

Step 8: Open the product which has a payment plan(s)

Step 9: Select the "Add a Payment Plan" checkbox

Step 10: Select the payment plan:





My Subscriptions List:

A customer can see their Subscriptions List in "My Account → My Subscriptions" page:

My Subscriptions

Original Order #	Original Order Date	Product	Amount	Interval	Start Date	Status	Actions	
000000234	5/25/20	Push It Messenger Bag	£37.48	Monthly	5/29/20	Active	Edit Cancel	
000000233	5/25/20	Push It Messenger Bag	£37.48	Monthly	5/29/20	Active	Edit Cancel	

A customer can edit their subscription in "My Subscriptions" page, and can also cancel it.

Edit Subscriptions:

Step 1: Login to the Front-end as a registered customer that has subscription(s).

- Step 2: Go to "My Account → my Subscriptions" page
- Step 3: Click "Edit"
- Step 4: The edit Subscription Form should be displayed with the following information:
 - 1. Subscription Information (Product Name, Payment Plan)
 - 2. Billing Information (Customer Name, Billing Address)
- 5: A customer can modify the following information:
 - 1. Billing Information (Customer Name, Billing Address)
- Step 6: Click the "Save Subscription" button
- Step 7: Customer is redirected to the "My Subscriptions" page with a "Subscription has been updated. "Message

Cancel Subscriptions

- Step 1: Login to the Front-end as registered customer that has subscription(s)
- Step 2: Go to "My Account → my Subscriptions" page
- Step 3: Click "Cancel"
- Step 4: Customer is redirected to "My Subscriptions" page with "Subscription has been cancelled. "Message. The subscription "Status" should be changed to "Cancelled". Customer cannot modify subscription.

My Subscriptions

Original Order #	Original Order Date	Product	Amount	Interval	Start Date	Status	Actions
000000973	5/21/20	Push It Messenger Bag	€100.00	Weekly	5/28/20	Cancelled	

Documentation:

https://developer.worldpay.com/docs/wpg/tokenisation/usetokens##submit-a-direct-payment -request-with-a-token

23. References

http://support.worldpay.com/support/xmlapi/content/home.htm

https://github.com/Worldpay/Worldpay-Magento2-CG/releases

http://support.worldpay.com/support/kb/gg/corporate-gateway-guide/content/mobilewallets/googlepay.htm

https://beta.developer.worldpay.com/docs/wpg/directintegration/3ds2

https://beta.developer.worldpay.com/docs/wpg/manage/modificationrequests

http://support.worldpay.com/support/kb/gg/merchantinterface/mai5402.html

http://support.worldpay.com/support/kb/bg/transactionmanagement/tm1080.html

https://beta.developer.worldpay.com/docs/wpg/tokenisation/usetokens#submit-a-hosted-payment-request-with-a-token

https://developer.worldpay.com/docs/wpg/tokenisation/usetokens##submit-a-direct-payment -request-with-a-token

https://developer.worldpay.com/docs/wpg/scaexemptionservices/exemptionengine