



Getting started with the Cashflows Gateway API

An introduction for developers

Version 2.0 – August 2022



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About this guide

Welcome to Getting started with the Cashflows Gateway API. This is an introduction for developers who have not worked with our Cashflows Gateway API before.

This guide assumes knowledge of programming and using API calls.

For more information

The Cashflows Help Centre

Our [Cashflows Help Centre](#) has all of our published guides plus answers to questions about Cashflows products. If you can't find the answer to your question, you can request a new article via your relationship manager or contact the following support teams.

Implementation support

For implementation support before your integration goes live:

Email: implementations@cashflows.com

Technical support

If your account is live with us and you need technical help:

Email: techsupport@cashflows.com



What is the Cashflows Gateway API?

To enable you to connect your payment processing system with the Cashflows Gateway, we offer our Cashflows Gateway API. By using our Cashflows Gateway API, you can integrate with all of the functionality that comes with our gateway for processing online payments. We take care of many of the technical complexities. This can save you time and money.

Key features of the Cashflows Gateway API

With our Cashflows Gateway API, you can send us requests for:

- A range of transaction types that put you in control. For a smooth customer experience you can authorise and capture funds together. Alternatively, you can reserve funds and defer the final payment until a customer is ready to pay for the service that they've received.
- Mail or telephone (MOTO) payments
- Payment links that can be embedded into invoices, text messages and social media posts
- Automating day-to-day tasks, such as processing recurring payments
- Securely storing card details for a customer's online account or for when they return to your website for future purchases
- Retrieving the full range of available payment methods that our gateway offers. This includes the logos and icons to display. If we add a payment method to the gateway, you can automatically offer it on a website checkout page without any extra development effort.
- For businesses using 3D secure version 2.2, our Gateway API supports requests for exemptions from Strong Customer Authentication (SCA). For information, visit the Cashflows Help Centre.

For more information about using the Cashflows Gateway API, refer to [Connecting with the Cashflows Gateway \(PDF\)](#) in the Cashflows Help Centre.

The benefits of using our Gateway API

As a developer working for an online business, the benefits include:

- More ways for customers to pay
Our Cashflows Gateway API enables acceptance of major card types, including Visa, Mastercard, and American Express. We're continually working to add new payment types to our gateway. The wider the range of payment methods that a business can offer, the more business a website is likely to attract. Customers can pay the way they want to. As we add more payment options to the Cashflows Gateway, they automatically become available to you via a single API call. No hard coding. No extra development effort needed.
- Accepting payments in other currencies
Our Cashflows Gateway supports a range of currencies as well as Pound Sterling - GBP. For the list of currencies that we support, you can visit our Cashflows Help Centre and search for *currencies*.
- Standards
Our gateway API is REST-based and uses recognisable methods. This makes it easy to learn and use.

- Extra detail about digital transactions enables better understanding about which payment methods your customers are using. Being able to identify these transactions can help with business decisions. The increased detail of payment types is included in transaction reports.
- Security
Support for built-in 3-D Secure authentication and authorisation checks plus commands that enable you to request SCA exemptions for transactions that qualify.
- Modern integration
Our Cashflows Gateway uses the latest integration practices to provide security and flexibility. You can use the same Cashflows Gateway API to implement a payment page that we host for you. For information, refer to Adding a Cashflows hosted payment page to a website (PDF) in the Cashflows Help Centre.
- Integration environment for testing
We have an API integration environment that you can use for testing. This does not affect any live data or interact with any external finance networks.

Industry standards

Our Cashflows Gateway API conforms to the OpenAPI Specification (OAS – formerly Swagger).

Our Cashflows Gateway API accepts requests in JSON that can be generated in a variety of popular languages including PHP, cURL, Java, or .NET.

Our Cashflows Gateway API is based on the REST (Representational State Transfer) architectural style. It uses standard methods, HTTP response codes, and authentication controls .

Standard response codes

Our gateway uses the following standardised codes in the responses that you receive. These codes tell you if a request was successful or not. A code that starts with 2 indicates success. A code that starts with 4 indicates an issue.

Code	Meaning
200	Payment or payment job received or retrieved or cancelled successfully
201	Payment job created successfully
400	Request contains errors
401	Invalid token
403	Insufficient permissions
404	Configuration not found
406	Bad response

For more information about response codes, visit the [Cashflows Help Centre](#).



Getting started

This section tells you what you need and what you need to do before you can start using our Cashflows Gateway API to send us your first test payment request.

Important: All examples are for illustration only. You need to replace some of the details with your own. We explain what to change and where.

What you need

Before you can send your first API request, you need:

- A Cashflows Go account
Cashflows Go is our online portal. It provides access to transaction data, payment tools and notifications. It's also where you can find the following API credentials that you need:
 - A Configuration ID
This is the unique identifier of the business account (also referred to as the merchant account). You need to include this in API messages so that we can recognise the business and match transactions to it. You can collect this from Cashflows Go
 - API key
This is the key to use for encrypting API messages that you send us. You can collect this from Cashflows Go

Recommended

We recommend using an integration account so that you can safely try using our APIs without affecting any live customers. We can set this up for you. To request an integration account, send an email to: implementations@cashflows.com.

What you need to do

- Confirm to us your test scenarios. For information, see [Confirm to us your test scenarios](#).
- Collect your access credentials. For information, see [Collect your access credentials](#)
- Tell us where to redirect customers after payment processing. For information, see [Tell us where to redirect customers after payment processing](#).
- Tell us where to send status updates after we have finished payment processing. For information, see [Tell us where to send payment status updates](#).
- Generate your signature. For information, see [Generate your signature](#).

Confirm to us your test scenarios

Before we can permit you to go live, we ask you to send us evidence of successful testing. Based on the types of transaction that you've told us you will be processing, we ask you to confirm to us the transaction scenarios that you will be testing. We send you our comprehensive test script that includes all of the payment scenarios that we support. You can then choose the test scenarios that apply to your business. Here's an extract:

	B	C
Test	Expected Result	
1 Successful Payment		
Take Payment now choice selected		N/A
Card Details Entered & Submitted		Request sent to CashFlows
Payment Processed		Successful Payment pop-up displayed to agent with
Customer order number shown		Visible in CashFlowsGo portal
Customer information shown		Visible in CashFlowsGo portal
Payment job status		Showing in portal as Paid
2 Successful Authentication		
Authenticate Card choice selected		N/A
Card Details Entered & Submitted		Request sent to CashFlows
Authentication Request Completed		Successful Authentication pop-up displayed to agent
Customer order number shown		Visible in CashFlowsGo portal
Customer information shown		Visible in CashFlowsGo portal
Payment job status		Verified
3 Successful Repeat Payment		
Repeat Processor Runs & Picks up due Payment		N/A
Payment Processed		Payment shown as taken in log file
Customer order number shown		Visible in CashFlowsGo portal
Customer information shown		Visible in CashFlowsGo portal
Payment job status		Paid

To confirm your test scenarios:

1. Save your accreditation spreadsheet in a location where you can easily find it and work on it.
2. Open the accreditation spreadsheet.
3. In the Payment Type column, enter the card type for example *Debit* or *Credit*.
4. In the Payment solution column, enter one of the options at the top such as:
 - Visa
 - Mastercard in full or abbreviated to MC
 - American Express in full or abbreviated to AMEX
 - PayPal in full or abbreviated to PP
 - Apple Pay in full or abbreviated to AP
 - Google Pay in full or abbreviated to GP.
5. In the Test Result column, type Y or Yes or Passed to confirm a successful test result.
6. In the Payment Job Number column, type the number of the payment job that was used to test the payment scenario. We can then check whether the test was successful or not.

Important: To prevent the payment job number from being treated like a number and rounded up, insert an apostrophe before the payment job number. Do not include any spaces.

7. If you have completed any live testing, complete the Live columns:
 - a. In the Live Result column, type Y or Yes or Passed to confirm successful live testing before release to customers.
 - b. In the Live Payment Job Number column, type the number of the payment job that was used for live testing.
8. In the Notes column, add any extra information that can be useful. For example, for a recurring payment, please provide the parent job number.
9. Send your completed list of *accreditation tests* to implementations@cashflows.com. This lets us know what you intend to test and enables us to check that you are correctly set up for the transactions that you're planning. We send you an accreditation confirmation to let you know that we're happy for you to go live.

Collect your access credentials

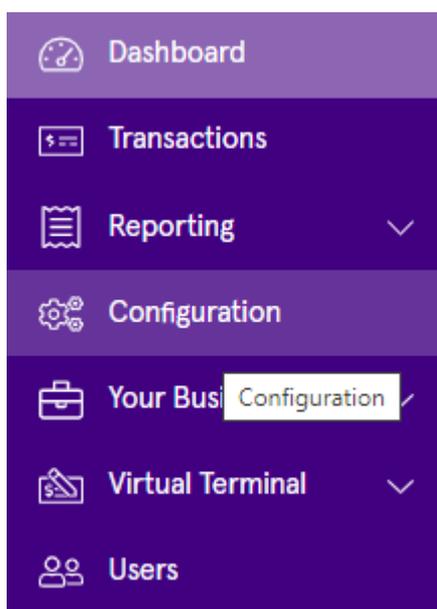
Before you can integrate your website with our gateway using the Cashflows Gateway API you need a:

- Configuration ID
This is the unique identifier of the business account (also referred to as the merchant account). You need to include this in API messages so that we can recognise the business and match transactions to it.
- Current API key
This is the key to use for encrypting API messages that you send us.

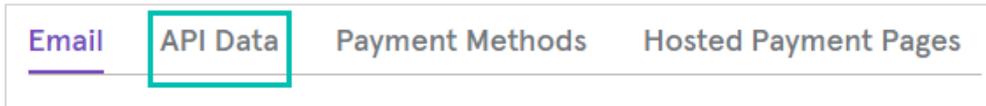
To collect your access credentials from Cashflows Go

Before you can use our API, you need to collect your access credentials from Cashflows Go.

1. Sign into [Cashflows Go](#). You can find step-by-step instructions in the Cashflows Help Centre.
2. From the Cashflows Go menu, select **Configuration**.



3. Select the **API Data** page.



The API Data page displays your API configuration details:

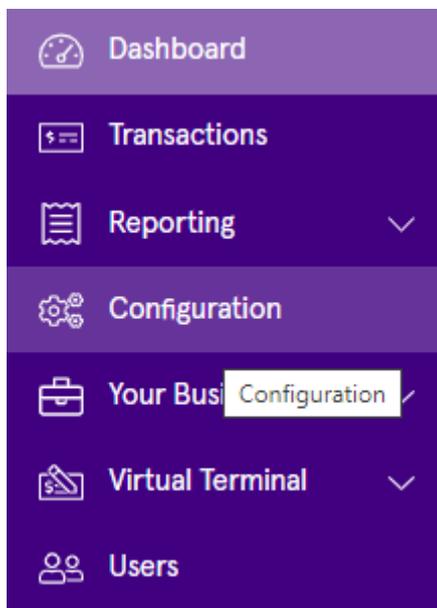
Use your ID and key to connect your website to our payment solutions.		
Configuration ID	201226100000131072	
Current API Key	e6d3ec72-7515-4774-81a5-5459b395ac0f	
New API Key	Generate a new API key	

You need to include the Configuration ID in any messages that you send to our API. This enables us to recognise the requests that you send as genuine.

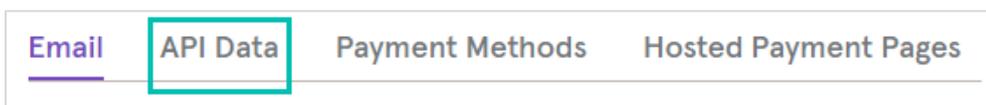
You need to use the Current API key to encrypt the API messages that you send us.

To generate a new API key

1. Sign into [Cashflows Go](#). You can find step-by-step instructions in the Cashflows Help Centre.
2. From the Cashflows Go menu, select **Configuration**.



3. Select the **API Data** page.



4. Select **Generate a new API key for migration**.

Use your ID and key to connect your website to our payment solutions.

Configuration ID	201226100000131072	
Current API Key	e6d3ec72-7515-4774-81a5-5459b395ac0f	
New API Key	Generate a new API key	

A new key is generated for you and displayed on the screen.

Use your ID and key to connect your website to our payment solutions. Update API Key

Configuration ID	201226100000131072
Current API Key	922429b6-cc20-47d9-b509-ff5e287ceee5
New API Key	e6d3ec72-7515-4774-81a5-5459b395ac0f

5. Wherever your integration uses the API key, replace the old key with the new one.
6. Select **Update API Key** to replace your old key with the new one.

Update API Key ✕

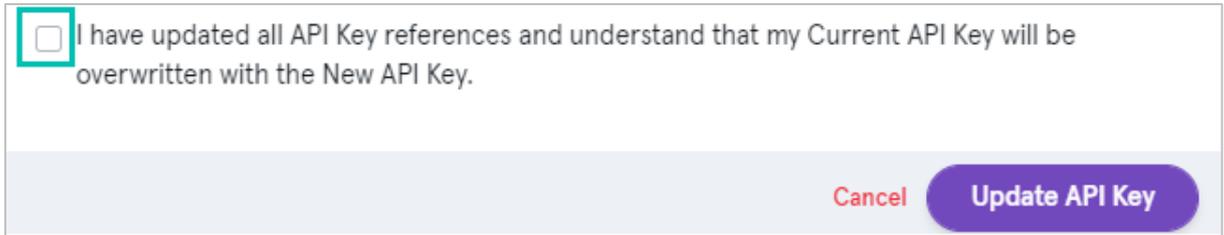
Current API Key	922429b6-cc20-47d9-b509-ff5e287ceee5
Will be replaced by:	
New API Key	e6d3ec72-7515-4774-81a5-5459b395ac0f

Please make sure that you have updated the API Key in all of your configuration instances. The New API Key will overwrite the current API Key and the Portal won't be able to connect any longer. Failing to update all configuration instances correctly could result in unnecessary application downtime.

I have updated all API Key references and understand that my Current API Key will be overwritten with the New API Key.

Cancel
Update API Key

- When you have successfully updated all references to your API key with the newly generated one, check the box to confirm.



I have updated all API Key references and understand that my Current API Key will be overwritten with the New API Key.

Cancel **Update API Key**

- Select **Update API Key**. The old key is replaced with the new one.

Tell us where to redirect customers after payment processing

After we finish processing their payments, we direct customers back to your website.

Note: For mail or phone (MOTO) payments, there is no redirection since the customer is not using a website. We process MOTO payments immediately.

We direct customers to a webpage according to the status of their payment (successful or failed). Alternatively, you can choose to display your own webpages. You just need to set the addresses (return URLs) of the pages that you want us to display instead. This section explains how to set the default return URLs in Cashflows Go.

Sometimes you might not want to use our default pages or your own, for example, if your business has more than one website for selling different things. If you're using our hosted payment page, you can override the default page. The customer then returns to your website via a webpage that relates to their purchase rather than the default page. For information, about how to override the default return address, refer to [Adding a Cashflows hosted payment page to a website](#) on the Cashflows Help Centre.

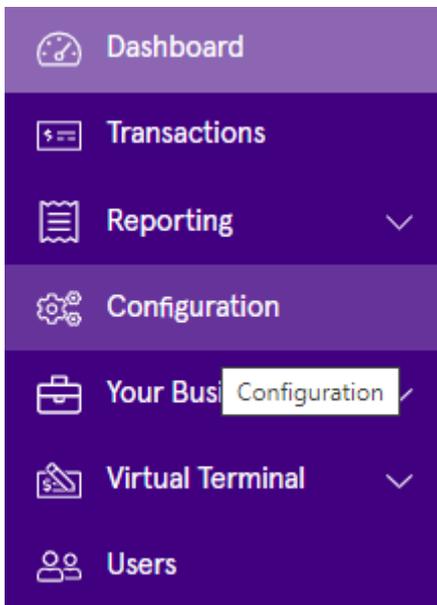
Note: For recurring payments, you don't need to set up any return URLs.

You can specify a different page for each of the following scenarios:

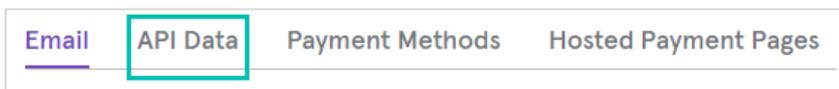
- Success:** A customer completes a successful transaction. You can display a Thank You page and explain what happens next, when they can expect their delivery and so on.
Tip: For security reasons, we recommend that you update an order only when you receive the payment status notification from us. A notification from our Cashflows Gateway assures you that a payment request has not been intercepted during transfer.
- Failed:** A customer fails to complete the payment process, for example because we (or their bank) did not approve it (the payment was declined). You can display a page to explain what might have happened and give the customer the opportunity to try again with a different payment method.

To tell us which pages to display:

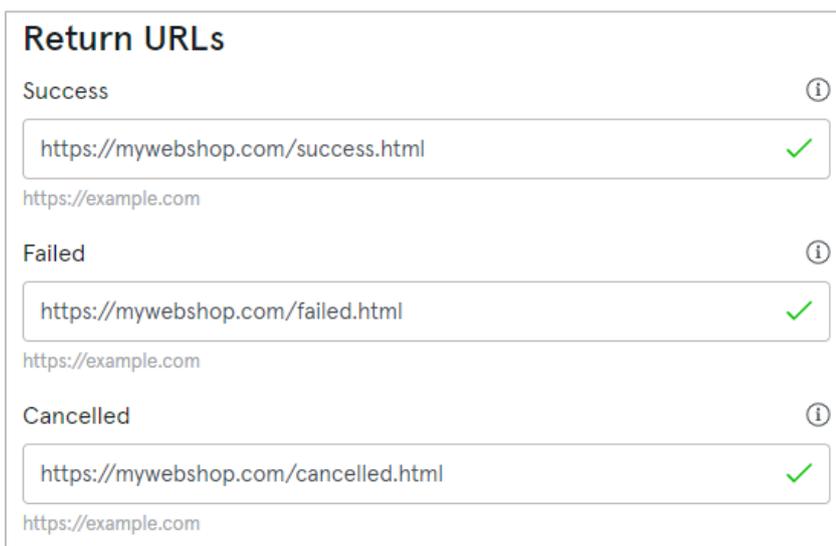
1. Sign into [Cashflows Go](#). You can find step-by-step instructions in the Cashflows Help Centre.
2. From the Cashflows Go menu, select **Configuration**.



3. Select the **API Data** page.



4. Select **Edit API Data**.
5. Add the address (URL) for each page that you would like to display for example:



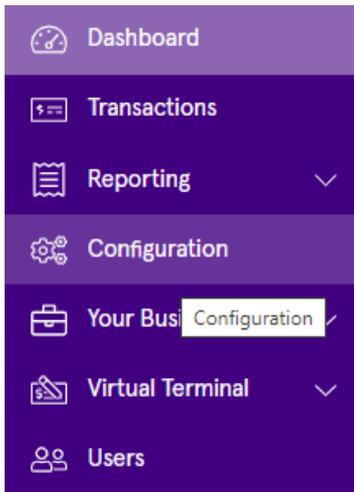
6. Select **Save**.

Tell us where to send payment status updates

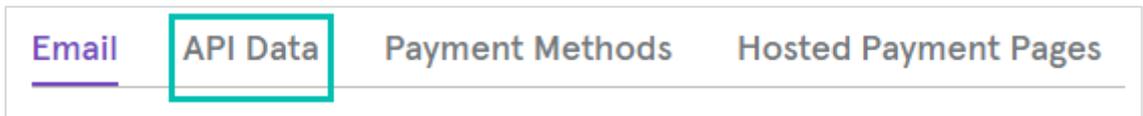
When we have processed a payment and the status changes, for example from *Pending* to *Paid*, we need to communicate this to your website. We use webhooks for this. A webhook is a way for one application to provide data to other applications as it happens (in real-time). This means that you receive data immediately. You don't need to check for changes in payment status. Instead, we can notify you, as long as you tell us where to send the notification webhooks.

To tell us where to send notification webhooks:

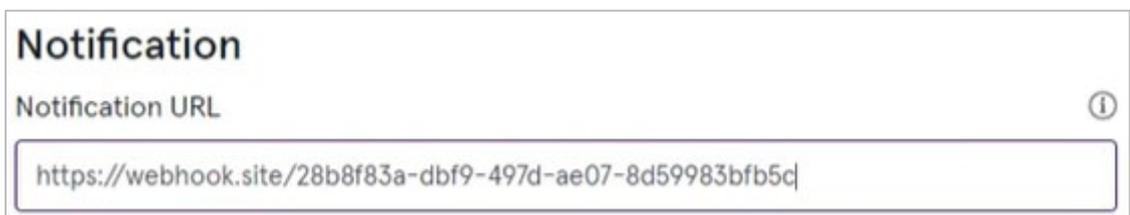
1. Sign into [Cashflows Go](#). You can find step-by-step instructions in the Cashflows Help Centre.
2. From the Cashflows Go menu, select **Configuration**.



3. Select the **API Data** page.



4. Select **Edit API Data**.
5. In the Notification section, add the Notification URL. This is the address where you would like us to send the notifications (webhooks). Here is an example.

A form titled "Notification" with a "Notification URL" label and an information icon. Below the label is a text input field containing the URL: `https://webhook.site/28b8f83a-dbf9-497d-ae07-8d59983bfb5c`.



Sending us a request

When you are ready to send us your first payment request, you can send it using HTTPS to our integration environment: <https://gateway-int.cashflows.com/api/gateway/payment-jobs>

Tip: We recommend that you use UTF-8 for encoding before you submit.

Here's an example request to create a new payment job. You can use it to send us a test request.

Note: If you are testing card payments, you need to use a valid card number. We provide some test cards that you can use. Visit the Cashflows Help Centre and search for *test* or *test card*. This example is using one of our test cards.

POST <https://gateway-int.cashflows.com/api/gateway/payment-jobs>

```
{ "type": "Payment", "paymentMethodsToUse": ["creditcard"], "parameters":  
{ "cardNumber": "4000000000000002", "cardCvc": "123", "cardExpiryMonth": "05",  
"cardExpiryYear": "23" }, "order": { "orderNumber": "Payment ref D1"}, "currency": "GBP",  
"amountToCollect": "10.00" }
```

Important: The capitalisation of parameters within API calls is important. Always use the same capitalisation as the examples that we provide.

Our integration guides in our Cashflows Help Centre include detailed instructions, with code examples, for sending different types of payment request. For more information, refer to:

- [Connecting with the Cashflows Gateway \(PDF\)](#)
An integration guide for developers who are working for an online business and want to integrate with all of the functionality that our Cashflows Gateway provides for processing online payments.
- [Adding a Cashflows hosted payment page to a website \(PDF\)](#)
An integration guide for developers who want to use a payment page that we host for an online business.



Testing your integration

To enable you to test your integration before going live, we have an integration environment where you can simulate different payment scenarios.

If you are testing card payments, you need to use a valid card number. We provide some test cards that you can use. Visit the Cashflows Help Centre and search for *test* or *test card*.

Important: You need different credentials for the integration and production environments. If you need an integration account for testing purposes, please email implementations@cashflows.com.

If you enter some test card details and select **Pay with card ...**, you see our 3-D Secure simulation page. For information, see [Using our 3-D Secure simulator](#).

Using our 3-D Secure simulator

Our 3-D Secure simulator provides options for you to simulate different scenarios so that you can test, for example, whether a transaction passes or fails 3-D Secure checks.



Authentication successful

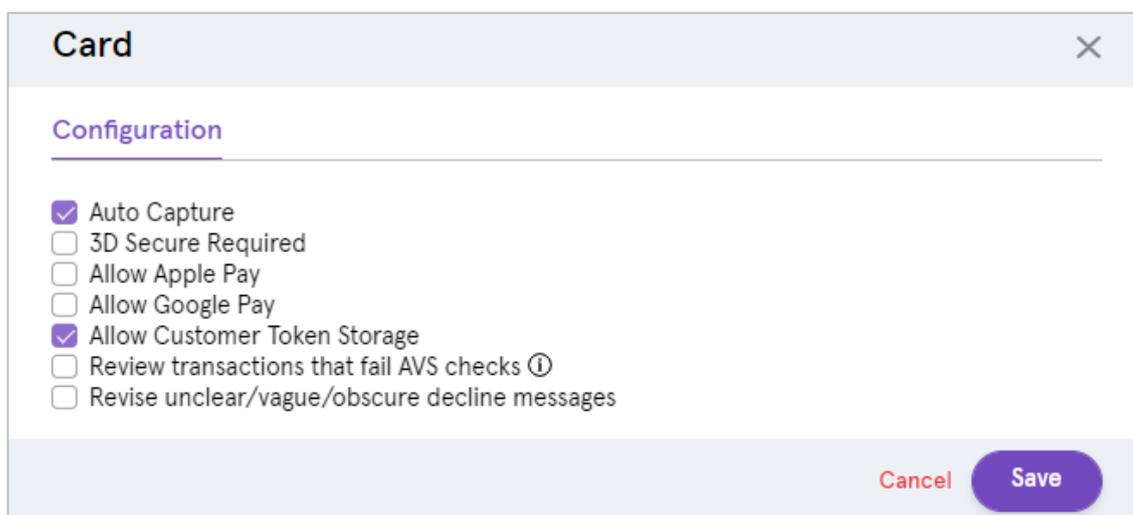
This option simulates a payment that has successfully passed all 3-D Secure checks. The payment will proceed to the authorisation stage of payment processing.

Authentication failed

This option simulates the scenario where a customer does not correctly complete 3-D Secure checks. For example, a customer might have entered the wrong authentication details. The payment will be declined by the gateway and will not proceed to the authorisation stage of payment processing.

Authentication unavailable

This option simulates the scenario where a card issuer's system is not available. The response depends on how the gateway is configured in Cashflows Go where there is a setting called **3D Secure Required**.



If this option is switched off, the payment will proceed to the authorisation stage of payment processing.

If this option is switched on, the payment will be declined by the gateway. It will not proceed to the authorisation stage of payment processing.

Note: You or the business owner can choose to reject a payment if 3-D Secure is unavailable.

Authentication attempted

This option simulates the scenario where the 3-D Secure system is available, but the card has not been enrolled for 3-D Secure. The payment will proceed to the authorisation stage of payment processing.



Going live

Important: You need different credentials for the production environment. You can't use your integration account credentials.

Before you can connect to our production environment for going live, you need:

- A production account
- Sign-in credentials

We provide these when your account has been approved. If you have not received these, email implementations@cashflows.com.

When you are satisfied that your integration is complete and working you can start processing live transactions by switching from the integration environment to the production environment).

You need to change your:

- Configuration ID.
- API key.
- The URLs that point to the environments where you send your API messages. This means that you need to change the integration (test) URL from <https://gateway-int.cashflows.com> to <https://gateway.cashflows.com> for the production environment.

Cashflows



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