



Connecting with the Cashflows Gateway

An integration guide for developers

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About this guide

Welcome to this guide about Connecting with the Cashflows Gateway. This is an integration guide for web developers. This guide assumes in-depth knowledge of programming and using Application Programming Interface (API) calls. This guide is for you if you are a developer working for a business that processes digital and eCommerce transactions.

This guide also assumes that you have read [Getting started with the Cashflows Gateway API](#) which is available from the [Cashflows Help Centre](#).

Note: The tasks described in this guide involve our Cashflows Gateway API. Our API accepts calls in JavaScript Object Notation (JSON). Therefore, the examples throughout this guide are in JSON. You can use different programming languages to create the JSON.

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 one of our support teams.

You can also find explanations of the responses from our payment processing (acquiring) platform. These codes can help you to understand why and how a payment may not have been successfully processed.

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



Introduction

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 and security complexities. This can save you time and money.

Our Cashflows Gateway API includes calls for:

- A range of transaction types that put you in control. For a smooth customer experience you can send us a request to authorise and capture funds together. Alternatively, you can send a request to reserve funds and defer the final payment until a customer is ready to pay for the service that they've received.
- Authorisation only. This is useful for reserving or ring-fencing funds for collection (capture) at a later date.
- Separate Authorisation and Final capture. You can defer a payment until a customer is ready to pay for a product or service. For information, see [Capture requests](#)
- Mail or telephone (MOTO) payments
For information, see [How to request a MOTO payment](#)
- Payment links that can be embedded into invoices, text messages and social media posts. For information, see [Managing payment links](#).
- Refunds and cancellations
For information, see [Refund requests](#) and [Cancellation requests](#).
- Payments that need to include extra details if a business is a financial organisation.
For information, see [Additional details required for financial institutions](#).
- Automating day-to-day tasks with recurring payments. For information, see [Recurring payments](#).
- Securely storing card details for a customer's online account or for when they return to your website for future purchases. For information, see [Stored card details](#).
- Retrieving the full range of available payment methods that our gateway offers. This includes the logos and icons to display. For information, see [How to retrieve details of supported payment methods](#).
- Fraud prevention checks
Our gateway ensures compliance and validation for each transaction request. It also offers, as standard, an extra security layer with built-in 3-D Secure authentication and authorisation checks. Our gateway includes 3-D Secure services (up to version 2.2). We also have a 3 D Secure simulator that you can use for testing your integration.
- For recurring transactions Cashflows Gateway supports requests for exemption from strong customer authentication (SCA).

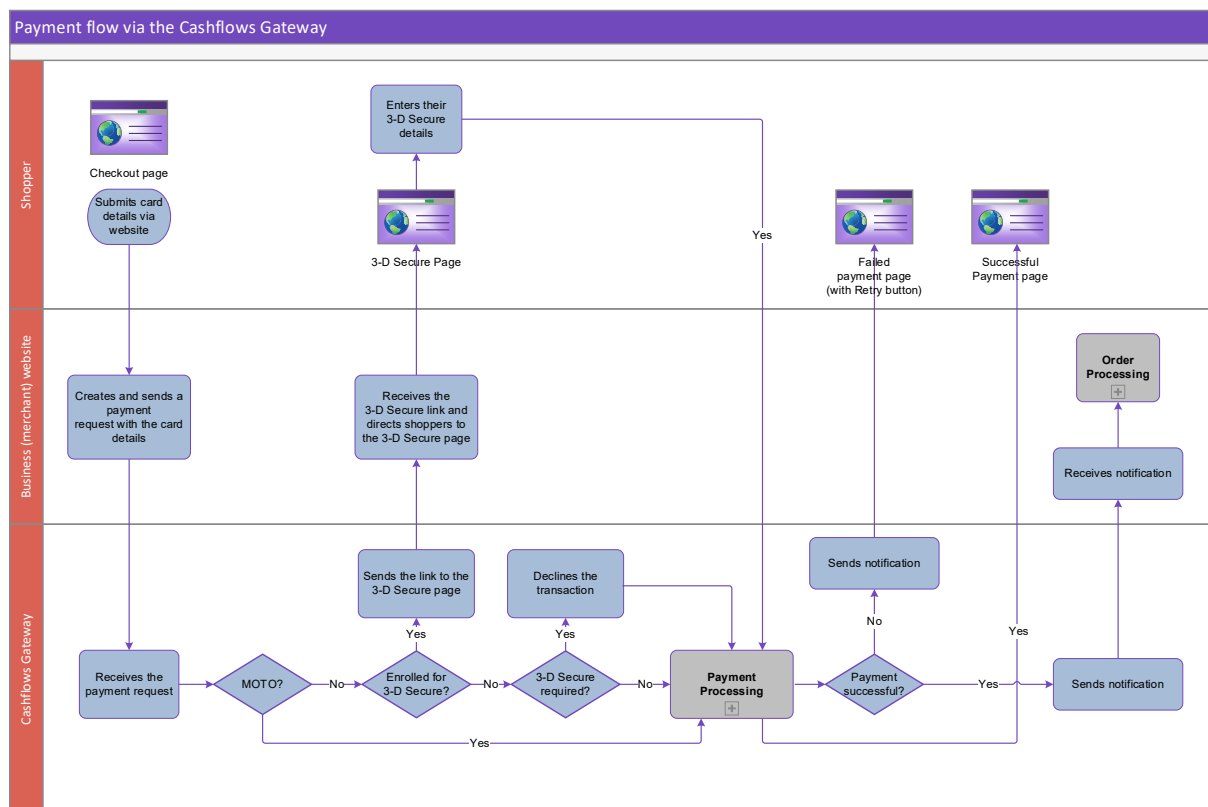
- Multiple payment methods for your checkout page
With a single API call you can retrieve the full range of available payment methods that our Cashflows gateway offers. This includes the logos to display. If we add a payment method to the gateway, you can automatically offer it on a website checkout page without any extra development effort. For information, see [How to retrieve details of supported payment methods](#).

Note: You or the business owner can choose which of the available payment methods to display on the checkout page. This is done in Cashflows Go. For information, refer to the [Cashflows Go Guide](#) (PDF) in the [Cashflows Help Centre](#).

How it works

This section illustrates how our Cashflows Gateway processes a payment when a customer pays for a product or service. This all happens in about one second.

The first diagram shows the high-level payment flow in terms of a shopping experience. The diagram that follows shows more detail with API calls that you'll be using to integrate your website with our gateway.

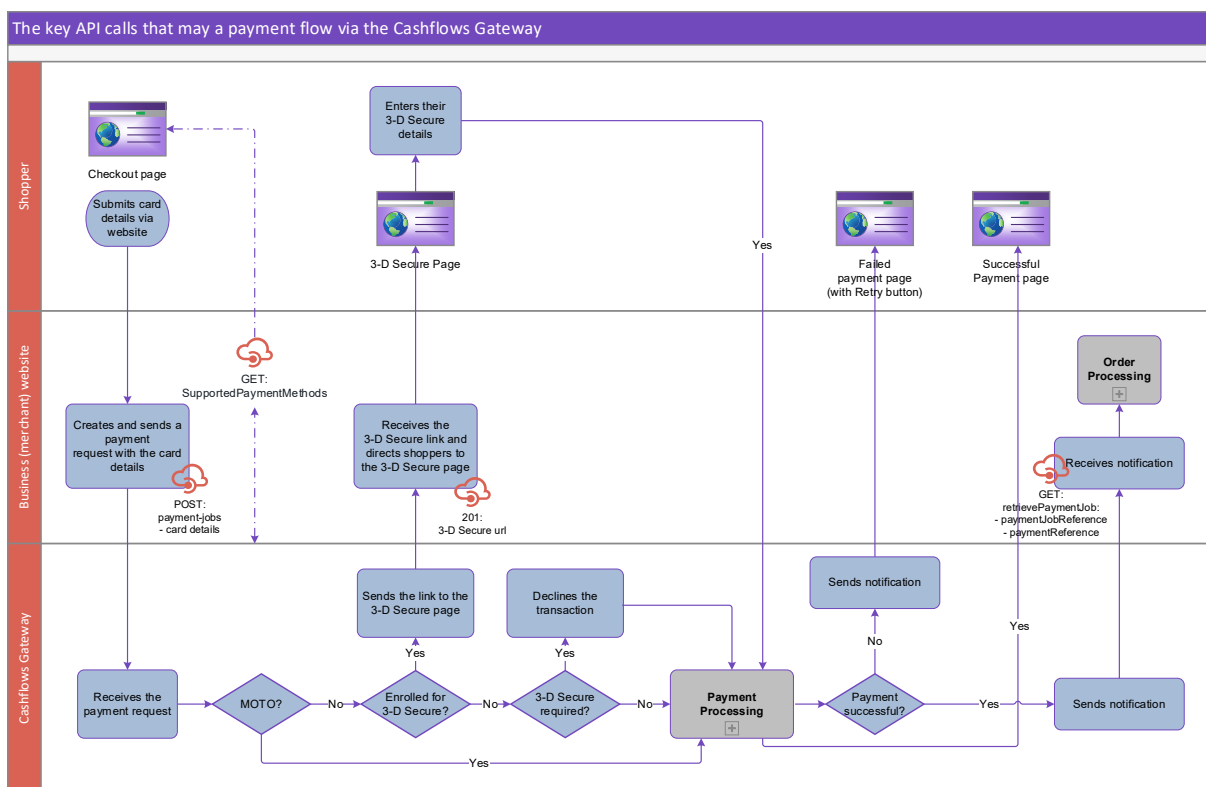


1. A customer starts the checkout process on your website when they choose to pay.
2. The customer securely enters their card details.
3. Your website sends a payment request to our online payment servers to initiate the transaction. The request includes the card details.
4. We receive the request with the card details.

5. We check whether it's a MOTO payment.
 - a. If it is a MOTO payment, we process the payment. If it isn't, we check whether the card is enrolled for 3-D Secure checks.
 - b. If the card is enrolled for 3-D Secure, we send you a link to the 3-D Secure page. This is where you need to direct the customer so that they can enter their 3-D Secure details.
 - c. If the card is not enrolled for 3-D Secure, we check whether 3-D Secure is required for this card.
 - d. If 3-D Secure is required, we decline the payment.
 - e. If 3-D Secure is not required, we process the payment.
6. We notify you about the change of status for the payment.
7. You fetch the latest status so that you can update the shopper's order and arrange delivery.
8. We direct the customer back to your website via a corresponding web page (successful or failed).

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.

Here is a diagram to show the payment flow with the key API calls. This guide explains the API calls to use at each stage of the process with example code for you to use.

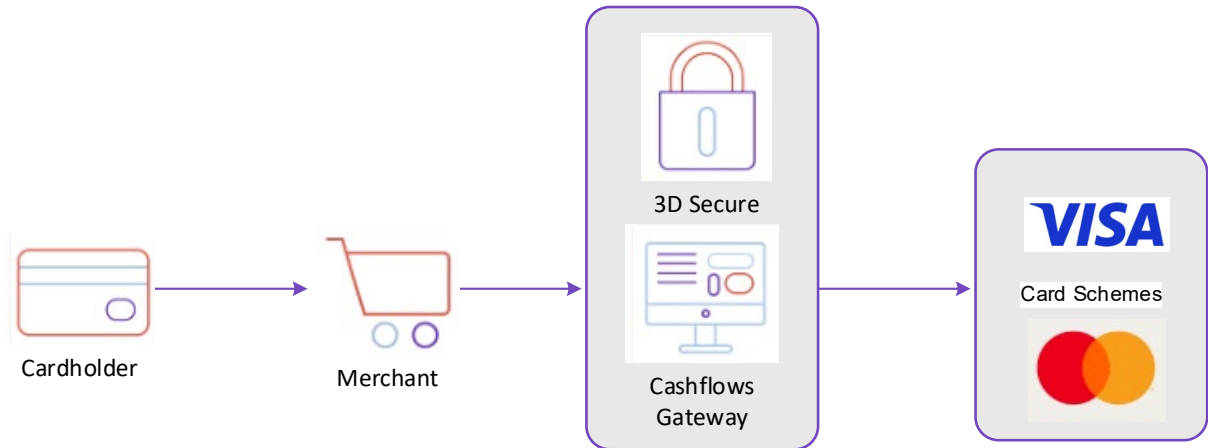


Important:

- The capitalisation of API calls is important. Always use the same capitalisation as the examples that we provide.

Protecting customers from fraud

Our Cashflows Gateway has built-in fraud prevention in the form of 3 D Secure (3DS). 3DS is an - industry-standard for ensuring Strong Customer Authentication (SCA). SCA is used by the payments industry to ensure that online transactions are secure and legitimate.



For more information about 3DS, refer to:

- [EMV 3-D Secure Specification](#)
- Visa website: [Visa 3-D Secure 2.0](#)
- Mastercard website: [Top 10 things to know about 3-D Secure](#)

3DS requires that some transactions include a challenge to customers to provide extra proof that they are authentic. For some types of low risk transactions, it's possible to request exemption from these extra checks. Our Cashflows Gateway currently supports exemptions for recurring Mastercard and Visa transactions. For information, see [Recurring payments](#).



Payment methods

When your website is integrated with our gateway, customers see a section in the checkout page where they can choose how they want to pay, for example by card or an alternative method that they prefer.

The Cashflows Gateway API includes a call that you can use to retrieve all of the payment methods that our gateway supports and present them for selection in your website. With a single API call you can automatically retrieve the full list of payment methods, together with logos and icons, instead of having to hard code each one. By using this call and the response results, you can avoid extra work in the future. When we add new payment methods, they will automatically be added to the list of payment options available on your website.

Important: Before you can display any payment methods on a checkout page, you need to enable them in Cashflows Go. For step-by-step instructions, visit the [Cashflows Help Centre](#).

How to retrieve details of supported payment methods

The API call to retrieve the payment methods is SupportedPaymentMethods. This call retrieves from the gateway all supported payment methods at once, including the logos and icons that represent each method, surcharges and so on.

You must encrypt the message with the API key that you collected from Cashflows Go. For information, refer to [Getting started with the Cashflows Gateway API](#) (PDF) which is available from the [Cashflows Help Centre](#).

Example request

GET <https://gateway-int.cashflows.com/api/gateway/supported-payment-methods>

Example response

```
{
  "data": [
    {
      "paymentMethod": "Card",
      "logo": "https://gateway-int.cashflows.com/assets/payment-method-card.svg",
      "issuerList": [],
      "supportsTokenisation": true,
      "tokenizedCards": [],
      "currencies": [
        "NoCurrencyCashflows",
        "AUD",
        "CAD",
        "DKK",
        "HKD",
        "JPY",
        "NZD",
        "NOK",
        "SGD",
        "ZAR",
        "SEK",
        "CHF",
      ]
    }
  ]
}
```

```
        "GBP",
        "USD",
        "EUR",
        "XXX"
    ],
    "description": "Card Simulator"
},
{
    "paymentMethod": "CreditCard",
    "logo": "https://gateway-int.cashflows.com/assets/payment-method-card.svg",
    "issuerList": [],
    "supportsTokenisation": true,
    "tokenizedCards": [],
    "currencies": [
        "NoCurrencyCashflows",
        "AUD",
        "CAD",
        "DKK",
        "HKD",
        "JPY",
        "NZD",
        "NOK",
        "SGD",
        "ZAR",
        "SEK",
        "CHF",
        "GBP",
        "USD",
        "EUR",
        "XXX"
    ],
    "description": "Card Simulator"
}
]
```



Payment requests

So that we can process an online payment, your website needs to send an API payment request to our online payment servers to initiate the transaction.

You send us the payment transaction details in an API message. The message needs to submit a payment request to create a payment job with the details of the transaction. For a card payment, the request needs to include the card details.

Important: For a card that is enrolled for 3-D Secure version 2.2, the cardholder name is required. For information, see [Required fields](#).

For all types of payment, we then send you a link to direct the customer to our gateway's 3-D Secure page. This page is where the customer securely enters their 3-D Secure details. We carry out 3-D Secure checks and, depending on the result of the checks, we accept the transaction for payment processing or decline it with a response code to indicate why.

You must encrypt the message with the API key that you collected from Cashflows Go. For information, refer to [Getting started with the Cashflows Gateway API](#) (PDF) which is available from the [Cashflows Help Centre](#).

You must use the same hashing technique that we do so that we can match our hash with yours. The hash assures message consistency and protects the payment request from being tampered with during transfer to our Cashflows gateway (a man-in-the-middle attack). For information, refer to [Getting started with the Cashflows Gateway API](#) (PDF) which is available from the [Cashflows Help Centre](#).

The process for submitting a payment request involves the following steps. These steps are described in the sections that follow:

1. Create a payment job.
This is a server-to-server call from your server to ours. After you have submitted the payment job, the Cashflows Gateway API returns a 201 response 'Payment job created successfully' (assuming that the request was successful). For information, see [How to create a payment job](#).
2. Receive the payment job details in the response to the payment job.
The API returns specific payment and order information plus a link (action URL) to determine the next stage of the payment processing. For card payments, the next step is usually 3-D Secure checking. Therefore, this link is likely to be a link to a 3-D Secure page. For information, see [How to receive a response to a payment request and redirect a customer](#).

If 3-D Secure is enabled, use the link to direct the customer to our 3-D Secure page where they can enter their extra security details. For information, see [How to receive a response to a payment request and redirect a customer](#).

How to create a payment job

To create a payment job, you must provide a payment job request that contains at least the mandatory required fields. To help you track payments, we recommend that you provide more than the mandatory fields in the payment job. As a minimum, consider including:

- Payment amount (mandatory)
- Currency
- Order reference (the reference that you generate)
- Customer name
- Customer email

Tip: As a starting point to establish and test connectivity, it's good enough to provide only the mandatory information. You can then add details as required to build out the payment job request. To make it easier for you to identify a payment, we recommend that you include as much information as possible. Our API includes many more details including billing/shipping details, order line details and more.

To create a payment job:

1. In the request header, provide your configuration ID and a hash.

Your configuration ID identifies your application to the gateway and is available in Cashflows Go. For information, refer [Getting started with the Cashflows Gateway API](#) which is available from the [Cashflows Help Centre](#).

2. Concatenate the message body to the API key to give one long string.

For example, to use an example API key like this:

```
845c51f6-1cd5-4338-a586-df752e65d690
```

To submit to the Cashflows API the following fields and values:

```
amountToCollect": "10.00", "currency": "GBP", "locale": "en_GB"
```

You would concatenate with the API key to give:

```
845c51f6-1cd5-4338-a586-df752e65d690{"amountToCollect": "10.00",  
"currency": "GBP", "locale": "en_GB" }
```

3. Hash the concatenated string to give, for example:

```
3CDF192F6AC67E3A491EF2B60EA9A03C6B408056CE19C3BBC307EB06A4CE1F4081B8D  
021B1E9760E7CC18EED479EDBAFF926DADC2953B5F8B25717B8D5CB7609
```

Important: Every field and value that you send, and every parenthesis, must be included in the hash.

The resulting headers must match the format of this example:

```
ConfigurationId:201226100000131072
```

```
Hash:3CDF192F6AC67E3A491EF2B60EA9A03C6B408056CE19C3BBC307EB06A4CE1F4081B8D021B1E9760E7CC18EED479EDBAFF926DADC2953B5F8B25717B8D5CB7609
```

Example: Create a new payment job

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

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

Required fields

Field	Description
amountToCollect	The total value of the payment transaction.
currency	The transaction currency.
cardholderName	The name of the customer. Required for transactions that need to have 3DS checks applied. A request without a cardholderName, will result in an error response.

Optional fields

Field	Description
orderNumber	The reference number that you generate to identify an order.
customerEmail	The email address of the customer.
locale	Determines the language that messages are displayed in. For example, to set the language to English, use the locale en-GB. Other options are: <ul style="list-style-type: none">el_GR (Greek)en_US (US English)nl_NL (Dutch)es_ES (Spanish) <p>Tip: If your language is not available, please choose the most appropriate language for your customers.</p>

Tip: Including optional customer and delivery details in your payment request enables us to display this information in Cashflows Go, for example in the transaction details and reports. This can make it easier for you to locate payments and help with reconciliation. The extra detail can also help our Customer Support team to find a payment it ever needs investigating.

Additional details required for financial institutions

To comply with financial regulations, a payment request from a financial institution needs to include some extra information about the person who is receiving the funds. You need to include the extra details in the recipientDetails object when you create a new payment job, a MOTO payment job a parent payment job, or a recurring payment job.

Note: For MCC 6012 payments, we advise that you check the card type as credit cards are not accepted.

Example request

```
{
  "type": "Payment",
  "paymentMethodsToUse": ["creditcard"],
  "currency": "GBP",
  "amountToCollect": "10.00",
  "parameters": {
    "cardNumber": "4000000000000002",
    "cardCvc": "123",
    "cardExpiryMonth": "05",
    "cardExpiryYear": "23",
    "cardHolderName": "Jon Snow",
    "mcc": "6012",
    "recipientDetails": {
      "lastName": "Smith",
      "dateOfBirth": "1980-07-29T23:00:00.000Z",
      "postcode": "CB21 5XE",
      "primaryAccountNumber": "111213313"
    }
  }
}
```

Required fields for financial institutions (MCC 6012, 6051 or 7299 businesses)

Field	Description
lastname	The family name or last name of the person who is receiving the funds (2-64 alphabetic characters, including -)
dateOfBirth	The date of birth of the person who is receiving the funds, in the format YYYYMMDD (8 digits)
postcode	The postcode of the person who is receiving the funds (2 to 16 alphabetic characters, including spaces)
primaryAccountNumber	The account number of the person who is receiving the funds. The account number must be in a valid format which is 1 to 32 alphanumeric characters which can include / and -. The account number cannot include spaces. For a card number, use the first six digits and the last four digits.

How to receive a response to a payment request and redirect a customer

The gateway receives the payment request and responds with:

- A response code (to confirm success or otherwise) and
- A link that points to the action URL where you should direct the customer.

Here is an example with the action URL, (in this case a 3-D Secure page) highlighted.

```
61      },
62      "action": {
63        "url": "https://gateway-int.cashflows.com/payment?
               ref=4ab07d818100e4880130c8e35d25ea1b317860763a486bd47dc3180cddd178dc6c4f9dd9cc9a6d140af7f976aa8cbd38457e78a7cd8874102f7728b7321a1f79
               ",
64        "type": "text/html"
65      },
```

If the request is successful, you receive a 201 response. For a list of other response codes, see [Response codes](#) later in this section.

To receive the response:

1. For a card payment, extract the link (action URL) and use it to take you to the integration environment 3-D Secure simulation page:



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. For more information, refer to [Getting started with the Cashflows Gateway API](#) (PDF) which is available from the [Cashflows Help Centre](#).

Response codes

After you have submitted a request to create a payment job, the Gateway API responds with a code. Ideally the response is a success code but can be any of the following.

Code	Description
201	Payment job created successfully.
400	Request contains errors.
401	Invalid token.
403	Insufficient permissions.
404	Configuration not found.
406	Bad response

Example response

When you send a request to create a payment job in our integration environment, you receive back a response that includes a link (action URL). For a card payment, this is usually a link to the 3-D Secure page. This is the link that you need to use to redirect the customer so that they enter their 3-D Secure details. As soon as we have the details that we need, we can process the payment. For more information, see [Payment processing](#).

Here is an example of the full response with the success response code included.

```
{
  "data": {
    "reference": "210221017179873304",
    "createDateTimeUtc": "2021-02-18T11:04:38.2907414Z",
    "type": "Payment",
    "traceReference": "210220121768573008",
    "configurationId": "200426117314086912",
    "domain": "cashflows.com",
    "locale": "en_GB",
    "timeZone": "Europe/London",
    "order": {
      "orderNumber": "Payment ref D1",
      "createDateTimeUtc": "2021-02-18T11:04:38.2907443Z",
      "orderLines": []
    },
    "orderHistory": [],
    "paymentMethodsToUse": [
      "Card"
    ],
    "currency": "GBP",
    "amountToCollect": "10.00",
    "expirationDateTimeUtc": "2021-08-18T11:04:38.2907396Z",
    "dueDateTimeUtc": "2021-02-18T11:14:38.8761894Z",
    "lastUpdateTimeUtc": "2021-02-18T11:04:38.2907435Z",
    "lastProcessedTimeUtc": "2021-02-18T11:04:38.2907426Z",
    "flags": {
      "direct": true
    },
    "attributes": {},
    "paymentStatus": "Pending",
    "payments": [
      {
        "reference": "210221117314091036",
        "createDateTimeUtc": "2021-02-18T11:04:38.4842538Z",
        "paymentMethods": [
          "Card"
        ],
        "status": "Pending",
        "amountToCollect": "10.00",
        "surchargeAmount": "0",
        "steps": [
          {
            "reference": "210221204311744516",
```



```

        "createDateTimeUtc": "2021-02-18T11:04:38.8763717Z",
        "action": "Start",
        "paymentMethods": [
            "Card"
        ],
        "status": "Pending",
        "amountToCollect": "10.00"
    }
],
"flags": {},
"attributes": {
    "returnUrlSuccess":
"https://www.mywebshop.com/?paymentjobref=210221017179873304&paymentref=210221117314091036&ordernumber=Payment+ref+D1",
    "returnUrlFailed":
"https://www.mywebshop.com/?paymentjobref=210221017179873304&paymentref=210221117314091036&ordernumber=Payment+ref+D1",
    "returnUrlCancelled":
"https://www.mywebshop.com?paymentjobref=210221017179873304&paymentref=210221117314091036&ordernumber=Payment+ref+D1&status=cancelled",
    "cashFlowsAcquiringDetails":
    "{\\"ThreeDSecureVersion\\":\\"1.0.2\\",\\"ThreeDSecureVersionReason\\":\\"3-D Secure v2 not enabled for this merchant.\\"}"
},
"refunds": [],
"captures": []
}
],
},
"links": {
    "data": {
        "url": "https://gateway-int.cashflows.com/api/gateway/payment-jobs/210221017179873304",
        "type": "application/json"
    },
    "action": {
        "url": "https://gateway-int.cashflows.com/payment/form-post?ref=4ab07d818100e4880130c8e35d25ea1bc381fe26d5ff52c0c5692920446c747de8a6e94459bc22b5184f86645f275caa21e76555ba0c111cc55412948a453b6e",
        "type": "text/html"
    },
    "documentation": {
        "url": "https://gateway-int.cashflows.com/payment-gateway-api/documentation/index.html",
        "type": "text/html"
    }
}
}
}

```



Payment processing

When you simulate a card payment in our integration environment, the 3-D Secure simulation page is displayed. For more information, see [Testing and going live](#).

When you simulate a successful or failed payment in our integration environment, we send you back a webhook to notify you about the payment status change, for example when the payment changes from *Pending* to *Paid*. If you haven't already done so, you need to tell us where to send these notification webhooks. For information, refer to [Getting started with the Cashflows Gateway API](#) (PDF) which is available from the [Cashflows Help Centre](#).

You can then use the *paymentJobReference* and *paymentReference* from the notification webhook to check the status of the order, update your system or database and continue with your own business processes for arranging fulfilment.

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. For additional security, we recommend matching the references provided by the webhook with the references stored by your system during creation of the payment job.

When we direct customers back to your website after we finish processing their payments, we direct them back to the confirmation webpage that corresponds to the status of their payment (successful or failed). By default, we use the addresses of the pages (return URLs) that you set up in Cashflows Go.

If your business has more than one website for selling different things, you can override the default address and tell us to use a different one that you specify in the payment job request. For information, see [How to override a default return address \(URL\)](#).

How to override a default return address (URL)

When you use our Cashflows Gateway, we provide default pages to display when we direct a customer back to your website after a successful or failed payment. You can use these default pages, or you can display your own. You just need to set the addresses (return URLs) of the pages that you want us to display instead. You do this in Cashflows Go. For information, refer to [Getting started with the Cashflows Gateway API](#) (PDF) which is available from the [Cashflows Help Centre](#).

Sometimes you might not want to use our default pages or yours. For example, if your business has more than one website for selling different things, you can override the default page. You can use an individual payment job request to tell us where to direct the customer. The shopper then returns to your website via a webpage that relates to their purchase rather than the default page.

Note: For recurring payments, you don't need to specify a return URL at all. For information, see [Recurring payments](#).

To override a default return URL

Include the return URL, for example <https://www.mywebshop.com?status=success>, in the create payment job request.

Important: Do not update any orders based on this URL. For security reasons, we recommend that you update an order only when you receive the payment status notification (webhook) from us. A notification from our Cashflows Gateway assures you that a payment request has not been intercepted during transfer.

Example

```
{ "amountToCollect": "10.00", "currency": "GBP", "locale": "en_GB", "order":  
  { "orderNumber": "Your ref1", "billingAddress" : { "firstName" : "Alex",  
    "lastName" : "Smith"}, "billingIdentity": { "emailAddress":  
      "alex@test.com" }}, "parameters": { "returnUrlSuccess":  
        "https://www.mywebshop.com?status=success", "returnUrlCancelled":  
        "https://www.mywebshop.com?status=cancelled", "returnUrlFailed":  
        "https://www.mywebshop.com?status=failed" }}
```



Payment status updates

To notify you about a payment status update, for example when the payment changes from *Pending* to *Paid*, we send you back a webhook. The body of the notification webhook includes the `paymentJobReference` and `paymentReference`. Here is an example.

REQUESTS (1/500) Newest First	
POST #e0b30 34.240.99.81 01/05/2021 10:28:42 AM	Request Details
	POST https://webhook.site/28b8f83a-dbf9-497d-ae07-8d59983bfb5c
	Host 34.240.99.81 whois
	Date 01/05/2021 10:28:42 AM (in a few seconds)
	Size 132 bytes
	ID e0b303d7-caab-484c-a346-e97ec28237f0
	Files
	Query strings (empty)
	Raw Content
	<pre>{ "notifyType": "PaymentStatusChange", "paymentJobReference": "210121017196646404", "paymentReference": "210121117230331908" }</pre>

When you receive a webhook, you need to extract these details and include them in a `RetrievePaymentJob` API call to get the payment status.

When the payment status has been confirmed, your business systems can be updated to match. For example, if the payment status is *Paid*, you can store this in your database and proceed with your shipping process.

Tip: For security reasons, we recommend that you update an order only when you receive the notification webhook from us. A notification from our Cashflows Gateway assures you that a payment request has not been intercepted during transfer.

How to receive a notification webhook

We recommend that when you receive a notification webhook from us, you use it to confirm the status of the payment before you update an order.

To receive the payment status:

1. Extract the `paymentJobReference` and `paymentReference` from the notification webhook.
2. Match these details with the corresponding references that you stored when you created the payment job.
3. Include them in a `RetrievePaymentJob` API call.

Example `RetrievePaymentJob`

GET <https://gateway-int.cashflows.com/api/gateway/payment-jobs/{paymentJobReference}/payments/{paymentReference}>

Example response with the payment status and amount

```
"status": "Paid",  
"amountToCollect": "10.00"
```

Required fields

Field	Description
paymentJobReference	The reference of the payment job to retrieve.
paymentReference	The reference of the payment to retrieve.
configurationId	Your configuration ID.
hash	A hexadecimal sha512 hash of your password.

Response codes

Code	Description
200	Payment retrieved successfully.
400	Request contains errors.
401	Invalid token.
403	Insufficient permissions.
404	Configuration, payment job or payment not found.

How to reply to a notification webhook

When the Cashflows Gateway receives the confirmed paymentJobReference and paymentReference, the notification process ends. It starts again when another payment status change occurs. It's good practice to acknowledge a notification webhook so that we know that you have received it.

Also, if the response does not contain the expected 200 response code and the message body, or if there is no response at all, the gateway keeps trying to send the same notification webhook for as long as a month. Initially, the retries are every minute and then every day and then every week. Therefore, if you don't acknowledge a notification webhook, the repeated attempts to send it create unnecessary gateway traffic.

To reply to a notification webhook:

Send the 200 response with the paymentJobReference and the paymentReference, for example:

```
{  
  paymentJobReference: "200421017498767380",  
  paymentReference: "200421100461508616"  
}
```



Mail or phone (MOTO) payment requests

After we receive the payment request with the card details, we check whether it's a Mail Order, Telephone Order (MOTO) payment. If it is, we process it without any 3-D Secure checks. By definition, a MOTO payment is made by email or telephone (or an Interactive Voice Response system) and therefore it's not possible to carry out 3-D Secure checks.

Tip: For MOTO (and eCommerce) payments, the issuing bank verifies the address details of the cardholder. We recommend capturing address details and switching on AVS checking. For more information, see [Address Verification Service \(AVS\) checks](#).

After we have processed the payment, we notify you about the change of status for the payment (for example from *Pending* to *Paid*). For information, see [Handling payment status updates](#).

How to request a MOTO payment

For a MOTO payment, include the *IsMoto* option in the payment request.

Example request

```
{
  "type": "Payment",
  "paymentMethodsToUse": ["creditcard"],
  "parameters": {
    "cardNumber": "4000000000000002",
    "cardCvc": "123",
    "cardExpiryMonth": "05",
    "cardExpiryYear": "23"
  },
  "order": {
    "orderNumber": "Payment ref M1"
  },
  "options": [ "IsMoto" ],
  "currency": "GBP",
  "amountToCollect": "5.00"
}
```

Example response

```
{
  "data": {
    "reference": "210221000033558552",
    "createDateTimeUtc": "2021-02-18T10:58:51.1499764Z",
    "type": "Payment",
    "traceReference": "210220104588703824",
    "configurationId": "200426117314086912",
    "domain": "cashflows.com",
    "locale": "en_GB",
    "timeZone": "Europe/London",
    "order": {
      "orderNumber": "Payment ref M1",
      "createDateTimeUtc": "2021-02-18T10:58:51.1499784Z",
      "orderLines": []
    },
    "orderHistory": [],
    "paymentMethodsToUse": [
      "Card"
    ],
    "currency": "GBP",
    "amountToCollect": "5.00",
    "amountCollected": "5.00",
    "paidAmount": "5.00",
    "paidDateTimeUtc": "2021-02-18T10:58:52.0469417Z",
    "expirationDateTimeUtc": "2021-08-18T10:58:51.1499752Z",
  }
}
```

```

    "lastUpdateTimeUtc": "2021-02-18T10:58:52.071243Z",
    "lastProcessedTimeUtc": "2021-02-18T10:58:51.1499771Z",
    "flags": {
      "moto": true,
      "direct": true
    },
    "attributes": {},
    "paymentStatus": "Paid",
    "payments": [
      {
        "reference": "210221100167776284",
        "createDateTimeUtc": "2021-02-18T10:58:51.3404954Z",
        "paymentMethods": [
          "Card"
        ],
        "status": "Paid",
        "amountToCollect": "5.00",
        "surchargeAmount": "0",
        "paidAmount": "5.00",
        "steps": [
          {
            "reference": "210221221659516928",
            "createDateTimeUtc": "2021-02-18T10:58:52.0467157Z",
            "action": "Start",
            "paymentMethods": [
              "Card"
            ],
            "status": "Paid",
            "amountToCollect": "5.00"
          }
        ],
        "flags": {},
        "attributes": {
          "returnUrlSuccess":
"https://www.mywebshop.com/?paymentjobref=210221000033558552&paymentref=210221100167776284&ordernumber=Payment+ref+M1",
          "returnUrlFailed":
"https://www.mywebshop.com/?paymentjobref=210221000033558552&paymentref=210221100167776284&ordernumber=Payment+ref+M1",
          "returnUrlCancelled":
"https://www.mywebshop.com?paymentjobref=210221000033558552&paymentref=210221100167776284&ordernumber=Payment+ref+M1&status=cancelled",
          "cashFlowsAcquiringDetails":
            "{ \"AuthCode\": \"AUTHOK\", \"Arn\": \"74501871049010015672137\", \"Message\": \"Authorised\", \"Status\": \"Successful\", \"IssuerResponseCode\": \"00\", \"CvvAvsResult\": \"200\", \"AcquirerResponseCode\": \"A\", \"TruncatedCardNumber\": \"400000*****0002\" }",
          "paymentMethodTransactionId": "01S00DAA658"
        },
        "refunds": [],
        "captures": []
      }
    ]
  }

```

```

    ]
  },
  "links": {
    "data": {
      "url": "https://gateway-int.cashflows.com/api/gateway/payment-jobs/210221000033558552",
      "type": "application/json"
    },
    "action": {
      "url": "https://www.mywebshop.com/?paymentjobref=210221000033558552&paymentref=210221100167776284&ordernumber=Payment+ref+M1",
      "type": "text/html"
    },
    "documentation": {
      "url": "https://gateway-int.cashflows.com/payment-gateway-api/documentation/index.html",
      "type": "text/html"
    }
  }
}

```

Required fields

Field	Description
IsMoto	A flag to indicate that a payment is a MOTO payment.
cardNumber	The number of the card that the customer is paying with. Note: This is mandatory unless a token is being used.
cardCvc	The security code that is usually on the back of the customer's card. Note: This is mandatory unless a token is being used.
cardExpiryMonth	The month when the card expires. Note: This is mandatory unless a token is being used.
cardExpiryYear	The year when the card expires. Note: This is mandatory unless a token is being used.
amountToCollect	The total value of the payment transaction.
paymentAmount	The total value of the payment transaction.
currency	The transaction currency.

Important: To comply with financial regulations, a payment request from a financial institution needs to include some extra information about the person who is receiving the funds. This includes payment requests for MOTO, parent and recurring transactions. You need to include the extra details in the recipientDetails object. For information, see [Additional details required for financial institutions](#).

Optional fields

Field	Description
cardholderName	The name of the customer. Required for transactions that need to have 3DS checks applied. A request without a cardholderName, will result in an error response.
customerEmail	The email address of the customer.
orderNumber	The reference number that you generate to identify an order.

Response codes

After you have submitted a request to create a MOTO payment job, the Cashflows Gateway API responds with a code. Ideally the response is a success code but can be any of the following.

Code	Description
201	Payment job created successfully.
400	Request contains errors.
401	Invalid token.
403	Insufficient permissions.
404	Configuration not found.
406	Bad response



Stored card details

Our Cashflows Gateway is an ideal way to enable customer s to securely save details of a card for an online account or for future purchases, if they want to. When they return to your website to buy something, they can use a stored card for a faster checkout. The card details are never revealed at any stage of the payment process. The card details are securely stored in a secure token vault. We convert the card details to a unique series of randomly-generated numbers (known as a *token*).

You can use API calls to send us a request for a token and then use the token in future payment requests instead of the card details. For information, see [How to request a token](#). We then send you the token to use in payment jobs for future transactions that use the same stored card. For subsequent payments by the same customer, you send us the token and not the stored card details.

Using a token instead of card details

Our Cashflows Gateway can securely store card details so that they are not revealed at any time during the payment process. If a customer chooses to store their card details on your website, you can send us the card details and ask us to convert them to a unique series of randomly-generated numbers (known as a *token*). We then validate the card and send you the token to use in payment jobs for future transactions that use the same stored card. For subsequent payments by the same customer, you send us the token and not the stored card details.

This section explains how to:

- Ask us to create a token from the card details that you send us. For information, see [How to request a token](#).
- Ask us to create a token during a payment. For example, if a customer wants to pay with a card that they haven't stored yet (so we haven't tokenised it yet). For information, see [How to request a token during a payment](#).
- Use a token for a payment instead of the card details. For information, see [How to use a token for a payment](#).

How to request a token

To request a token, you need to tell us the card details that you would like us to convert to a token (tokenise).

Example Request

POST <https://gateway-int.cashflows.com/api/gateway/card-tokenisation>

```
{ "cardNumber": "4000000000000002", "CardHolderName": "A Smith", "cardExpiryYear": "21",  
  "cardExpiryMonth": "10", "cardCvc": "123" }
```

Example Response

```
{  
  "data": {  
    "token": "1000000000030419",  
    "cardExpiryMonth": "10",  
    "cardExpiryYear": "21",  
    "truncatedCardNumber": "400000****0002"  
  }  
}
```

Required fields

Field	Description
cardNumber	The card number to be converted to a token (tokenised).
cardHolderName	The name of the customer. Required for transactions that need to have 3DS checks applied. A request without a cardholderName, will result in an error response.
cardExpiryYear	The year when the card expires in the format YY (2 digits). For example, if the card expires in 2025, set this to 25.
cardExpiryMonth	The month when the card expires in the format MM {01-12}. For example, if the card expires in April, set this to 04.
cardCvc	The security code on the back of the card.

How to request a token during a payment

If a customer wants to pay with a card that they haven't stored yet (so we haven't tokenised it yet), you can ask us to tokenise it during the payment process. You add the token request to the payment request by including the option *GenerateToken*.

Example request to generate a token

```
{
  "type": "Payment",
  "paymentMethodsToUse": ["creditcard"],
  "parameters": {
    "cardNumber": "4000000000000000002",
    "cardCvc": "123",
    "cardExpiryMonth": "05",
    "cardExpiryYear": "23",
    "cardHolderName": "Jon Snow",
    "order": {
      "orderNumber": "Payment ref D1T",
      "options": ["GenerateToken"],
      "currency": "GBP",
      "amountToCollect": "10.00"
    }
  }
}
```

The response provides the result of the 3-D Secure checks and if the payment passes the 3-D Secure checks, it includes you with the requested token.

Example response with the link to the 3-D Secure page:

```
{
  "data": {
    "reference": "210221000000135192",
    "createDateTimeUtc": "2021-02-18T11:17:27.1270204Z",
    "type": "Payment",
    "traceReference": "210220104756475984",
    "configurationId": "200426117314086912",
    "domain": "cashflows.com",
    "locale": "en_GB",
    "timeZone": "Europe/London",
    "order": {
      "orderNumber": "Payment ref D1T",
      "createDateTimeUtc": "2021-02-18T11:17:27.1270232Z",
      "orderLines": []
    },
    "orderHistory": [],
    "paymentMethodsToUse": [
      "Card"
    ],
    "currency": "GBP",
    "amountToCollect": "10.00",
    "expirationDateTimeUtc": "2021-08-18T11:17:27.1270185Z",
    "dueDateTimeUtc": "2021-02-18T11:27:27.6829616Z",
    "lastUpdateTimeUtc": "2021-02-18T11:17:27.1270223Z",
    "lastProcessedTimeUtc": "2021-02-18T11:17:27.1270215Z",
    "flags": {
      "generateToken": true,
      "direct": true
    },
    "attributes": {},
    "paymentStatus": "Pending",
    "payments": [
      {
        "reference": "210221100134352924",
        "createDateTimeUtc": "2021-02-18T11:17:27.3627718Z",
```

```

    "paymentMethods": [
      "Card"
    ],
    "status": "Pending",
    "amountToCollect": "10.00",
    "surchargeAmount": "0",
    "steps": [
      {
        "reference": "210221221491613700",
        "createDateTimeUtc": "2021-02-18T11:17:27.6831162Z",
        "action": "Start",
        "paymentMethods": [
          "Card"
        ],
        "status": "Pending",
        "amountToCollect": "10.00"
      }
    ],
    "flags": {},
    "attributes": {
      "returnUrlSuccess":
"https://www.mywebshop.com/?paymentjobref=210221000000135192&paymentref=210221100134352924&ordernumber=Payment+ref+D1T",
      "returnUrlFailed":
"https://www.mywebshop.com/?paymentjobref=210221000000135192&paymentref=210221100134352924&ordernumber=Payment+ref+D1T",
      "returnUrlCancelled":
"https://www.mywebshop.com?paymentjobref=210221000000135192&paymentref=210221100134352924&ordernumber=Payment+ref+D1T&status=cancelled",
      "cashFlowsAcquiringDetails":
        "{ \"ThreeDSecureVersion\": \"1.0.2\", \"ThreeDSecureVersionReason\": \"3-D Secure v2 not enabled for this merchant.\" }"
    },
    "refunds": [],
    "captures": []
  }
],
},
"links": {
  "data": {
    "url": "https://gateway-int.cashflows.com/api/gateway/payment-jobs/210221000000135192",
    "type": "application/json"
  },
  "action": {
    "url": "https://gateway-int.cashflows.com/payment/form-post?ref=4ab07d818100e4880130c8e35d25ea1ba2c0683e11093a397f633206169e119a9f117f236e44a080e0e737832494b8ac1058c297e401acd1001f1a2ef9468837",
    "type": "text/html"
  },
  "documentation": {

```

```

        "url": "https://gateway-int.cashflows.com/payment-gateway-
api/documentation/index.html",
        "type": "text/html"
    }
}
}

```

Example response with the token

After 3-D Secure checking is complete, the retrieve payment job provides you with the token (highlighted).

```

{
  "data": {
    "reference": "210221000000135192",
    "createDateTimeUtc": "2021-02-18T11:17:27.127Z",
    "type": "Payment",
    "traceReference": "210220104756475984",
    "configurationId": "200426117314086912",
    "domain": "cashflows.com",
    "locale": "en_GB",
    "timeZone": "Europe/London",
    "order": {
      "orderNumber": "Payment ref D1T",
      "createDateTimeUtc": "2021-02-18T11:17:27.127Z",
      "orderLines": []
    },
    "orderHistory": [],
    "paymentMethodsToUse": [
      "Card"
    ],
    "currency": "GBP",
    "amountToCollect": "10.00",
    "amountCollected": "10.00",
    "paidAmount": "10.00",
    "paidDateTimeUtc": "2021-02-18T11:19:57.773Z",
    "expirationDateTimeUtc": "2021-08-18T11:17:27.127Z",
    "dueDateTimeUtc": "2021-02-18T11:27:27.682Z",
    "lastUpdateTimeUtc": "2021-02-18T11:19:57.811Z",
    "lastProcessedTimeUtc": "2021-02-18T11:17:27.127Z",
    "flags": {
      "generateToken": true,
      "direct": true,
      "createdOnMapi": true
    },
    "attributes": {},
    "paymentStatus": "Paid",
    "payments": [
      {
        "reference": "210221100134352924",

```

```

    "createDateTimeUtc": "2021-02-18T11:17:27.362Z",
    "paymentMethods": [
      "Card"
    ],
    "status": "Paid",
    "amountToCollect": "10.00",
    "surchargeAmount": "0",
    "paidAmount": "10.00",
    "steps": [
      {
        "reference": "210221221491613700",
        "createDateTimeUtc": "2021-02-18T11:17:27.683Z",
        "action": "Start",
        "paymentMethods": [
          "Card"
        ],
        "status": "Pending",
        "amountToCollect": "10.00"
      },
      {
        "reference": "210221221525168132",
        "createDateTimeUtc": "2021-02-18T11:19:57.773Z",
        "action": "Process",
        "paymentMethods": [
          "Card"
        ],
        "status": "Paid",
        "amountToCollect": "10.00"
      }
    ],
    "flags": {},
    "attributes": {
      "returnUrlSuccess":
"https://www.mywebshop.com/?paymentjobref=210221000000135192&paymentref=210221100134352924&ordernumber=Payment+ref+D1T",
      "returnUrlFailed":
"https://www.mywebshop.com/?paymentjobref=210221000000135192&paymentref=210221100134352924&ordernumber=Payment+ref+D1T",
      "returnUrlCancelled":
"https://www.mywebshop.com?paymentjobref=210221000000135192&paymentref=210221100134352924&ordernumber=Payment+ref+D1T&status=cancelled",
      "cashFlowsAcquiringDetails":
        "{ \"ThreeDSecureVersion\": \"1.0.2\", \"ThreeDSecureVersionReason\": \"3-D Secure v2 not enabled for this merchant.\", \"AuthenticationStatus\": \"Y\", \"Xid\": \"pBoZubEx533uMpLNFjuXU0LMRq1=\", \"Cavv\": \"aq0zADZ1wIha0IgU3j9FRt0sA2V=\", \"Eci\": \"05\", \"AuthCode\": \"AUTHOK\", \"Arn\": \"74501871049010015672418\", \"Message\": \"Authorised\", \"Status\": \"Successful\", \"IssuerResponseCode\": \"00\", \"CvvAvsResult\": \"200\", \"AcquirerResponseCode\": \"A\", \"TruncatedCardNumber\": \"400000*****0002\" }",
      "originatingIpAddress": "81.106.197.200, 95.100.156.174, 88.221.51.77",
      "originHeader": "https://integration.cashflows.com",

```

```

        "paymentMethodTransactionId": "01S00DAA6A7",
        "token": "1000000000030419"
    },
    "refunds": [],
    "captures": []
  }
]
},
"links": {
  "data": {
    "url": "https://gateway-int.cashflows.com/api/gateway/payment-jobs/210221000000135192?locale=en_GB",
    "type": "application/json"
  },
  "documentation": {
    "url": "https://gateway-int.cashflows.com/payment-gateway-api/documentation/index.html",
    "type": "text/html"
  }
}
}
}

```

Required fields

Field	Description
cardNumber	The card number to be converted to a token (tokenised).
cardholderName	The name on the card that the customer is paying with. Required for transactions that need to have 3DS checks applied. A request without a cardholderName, will result in an error response.
cardExpiryYear	The year when the card expires in the format YY (2 digits). For example, if the card expires in 2025, set this to 25.
cardExpiryMonth	The month when the card expires in the format MM {01-12}. For example, if the card expires in April, set this to 04.
cardCvc	The security code on the back of the card.
generateToken	Flag to indicate that this is a request to generate a token.

How to use a token for a payment

When you have received a token, you can use it in a payment request. You just need to replace the cardNumber field with the token field. We then process the payment as usual.

Example request

```
{
  "type": "Payment",
  "locale": "en_GB",
  "paymentMethodsToUse": ["creditcard"],
  "parameters": {
    "token": "1000000000030419",
    "cardCvc": "123",
    "cardExpiryMonth": "05",
    "cardExpiryYear": "23"
  },
  "order": {
    "orderNumber": "Payment ref D1UT",
    "currency": "GBP",
    "amountToCollect": "10.00"
  }
}
```

Example response

```
{
  "data": {
    "reference": "210221000033689624",
    "createDateTimeUtc": "2021-02-18T11:30:38.7419169Z",
    "type": "Payment",
    "traceReference": "210220104588703828",
    "configurationId": "200426117314086912",
    "domain": "cashflows.com",
    "locale": "en_GB",
    "timeZone": "Europe/London",
    "order": {
      "orderNumber": "Payment ref D1UT",
      "createDateTimeUtc": "2021-02-18T11:30:38.741919Z",
      "orderLines": []
    },
    "orderHistory": [],
    "paymentMethodsToUse": [
      "Card"
    ],
    "currency": "GBP",
    "amountToCollect": "10.00",
    "expirationDateTimeUtc": "2021-08-18T11:30:38.7419153Z",
    "dueDateTimeUtc": "2021-02-18T11:40:39.2516539Z",
    "lastUpdateDateTimeUtc": "2021-02-18T11:30:38.7419183Z",
    "lastProcessedDateTimeUtc": "2021-02-18T11:30:38.7419176Z",
    "flags": {
      "direct": true
    },
    "attributes": {},
    "paymentStatus": "Pending",
    "payments": [
      {
        "reference": "210221100167907356",
        "createDateTimeUtc": "2021-02-18T11:30:38.8874465Z",
        "paymentMethods": [
          "Card"
        ],
        "status": "Pending",
        "amountToCollect": "10.00",

```

```

    "surchargeAmount": "0",
    "steps": [
      {
        "reference": "210221204311875588",
        "createDateTimeUtc": "2021-02-18T11:30:39.2518647Z",
        "action": "Start",
        "paymentMethods": [
          "Card"
        ],
        "status": "Pending",
        "amountToCollect": "10.00"
      }
    ],
    "flags": {},
    "attributes": {
      "returnUrlSuccess":
"https://www.mywebshop.com/?paymentjobref=210221000033689624&paymentref=210221100167907356&ordernumber=Payment+ref+D1UT",
      "returnUrlFailed":
"https://www.mywebshop.com/?paymentjobref=210221000033689624&paymentref=210221100167907356&ordernumber=Payment+ref+D1UT",
      "returnUrlCancelled":
"https://www.mywebshop.com?paymentjobref=210221000033689624&paymentref=210221100167907356&ordernumber=Payment+ref+D1UT&status=cancelled",
      "cashFlowsAcquiringDetails":
        "{\n\"ThreeDSecureVersion\":\n\"1.0.2\", \n\"ThreeDSecureVersionReason\":\n\"3-D Secure v2 not enabled for this merchant.\n\"}"
    },
    "refunds": [],
    "captures": []
  }
],
},
"links": {
  "data": {
    "url": "https://gateway-int.cashflows.com/api/gateway/payment-jobs/210221000033689624",
    "type": "application/json"
  },
  "action": {
    "url": "https://gateway-int.cashflows.com/payment/form-post?ref=4ab07d818100e4880130c8e35d25ea1bbf867b6a880705a3ec3b702f979abd9acc488c04c93f40cf3cb32634459161dcc4296d0bd680e7a4bf8f9e051c2a5bd0",
    "type": "text/html"
  }
},

```

```

    "documentation": {
      "url": "https://gateway-int.cashflows.com/payment-gateway-
api/documentation/index.html",
      "type": "text/html"
    }
  }
}

```



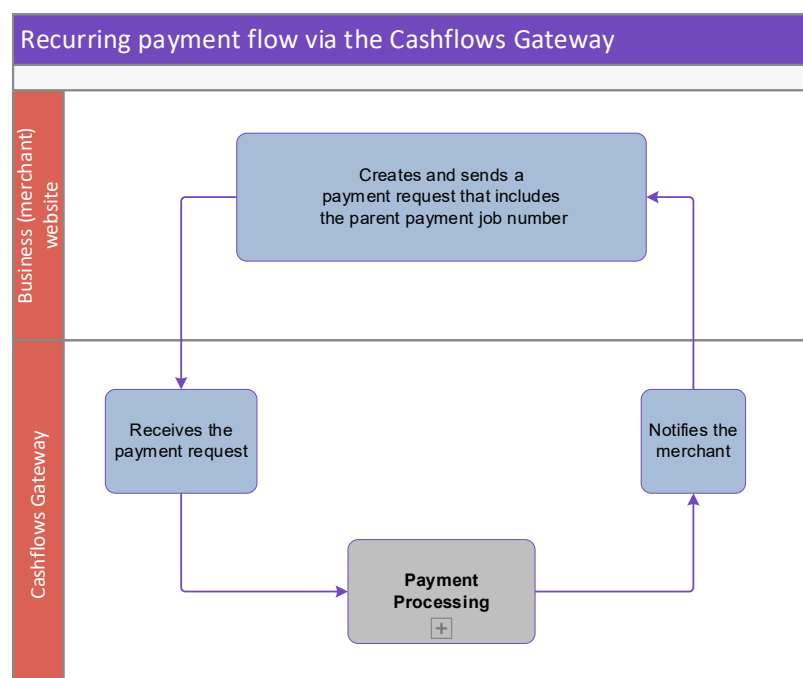
Recurring payments

For a recurring payment, your website needs to send us a payment request that includes a unique job number for the parent job under which the recurring child payments will take place. Therefore, you need to first create a parent payment job. Our Cashflows Gateway can then process the payment as usual and reply with a notification webhook to tell you the payment status of the parent job.

The first occurrence of a recurring payment must have 3D Secure checks applied so that we can set up the Recurring Parent Payment Job Reference. We use this reference instead of the card data when subsequent recurring or instalment payments need to be authorised. As part of the authorisation request of these child payments, you must submit the required recurring payment details (recurrenceCriteria) such as the type of recurring payment, the frequency and the end date. For information see, [Required fields](#).

Any **recurring child payments do not need notification webhooks**. The status of a child payment is returned in the API response. Therefore, using the API response saves you some work and avoids unnecessary webhook traffic.

If you have set up a notification webhook in Cashflows Go, it gets used by the parent job (as required) but is also used automatically by the child payment jobs (not required). Therefore, instead of specifying the notification webhooks in Cashflows Go, you need to specify notification webhooks in the create payment job API request for the parent payment. This gives you greater control because you include a notification webhook only when need to (that is in the case of a parent payment). It also means that you don't need to reply to unnecessary webhooks, as described earlier in [How to reply to a notification webhook](#).



The process for setting up and processing a recurring payment involves the following steps:

1. Create a parent payment job for the initial transaction
The cardholder needs to be present so that they can enter their card details, including security code (CVV) and go through 3-D Secure checks, if applicable. This initial transaction can include a payment or can be for a zero amount (to verify the card). This is also when you specify the notification webhook to use for the status of the parent payment. For information about creating a parent payment job, see [How to create a parent payment job](#).
2. Create the recurring child payment request that includes the unique job number (parentPaymentJobReference) of the parent payment job so that we can retrieve the card details to use for future payments. For information, see [How to create a recurring payment job](#).

How to create a parent payment job

To set up a recurring payment, you need to create the parent payment job to verify a customer's card and take a payment. Future recurring payments will be child payment jobs of this *parent*.

For a parent payment, you also need to specify the notification webhook to use for the status of the parent payment.

You can create a parent payment job via our Cashflows Gateway or via a hosted payment page, if you're using one. For information about using a hosted payment page, refer to [Adding a hosted payment page to a website](#) (PDF) which is available from the [Cashflows Help Centre](#).

When you create a payment job via the Cashflows Gateway, you need to include some additional information in the request to make this payment job into a parent payment job. The request must include the option 'IsRecurringPaymentJobParent' as well as the type of recurring payment. The Cashflows Gateway supports the following types of recurring payment:

- **Subscription:** a series of sequential payments for the same amount each time. An example of a recurring subscription payment is a gym membership
- **Instalment:** a set number of pre-agreed payments with a fixed end date for the final payment
- **Unscheduled:** a type of recurring payment that's used for transactions that occur on a non-fixed schedule and/or have variable amounts. An example of an unscheduled recurring payment is automatic top-ups when a cardholder's balance falls below a certain amount

Depending on the type of recurring payment that you want to make, you must ensure that you supply the correct recurrence type.

Important: To comply with financial regulations, a payment request from a financial institution needs to include some extra information about the person who is receiving the funds. This includes payment requests for MOTO, parent and recurring transactions. You need to include the extra details in the recipientDetails object. For information, see [Additional details required for financial institutions](#).

Example request for a recurring subscription payment

```
{ "type": "Payment", "locale": "en_GB", "options": [ "IsRecurringPaymentJobParent" ], "paymentMethodsToUse": [ "creditcard" ], "parameters": { "cardNumber": "4000*****0002", "cardCvc": "123", "cardExpiryMonth": "05", "cardExpiryYear": "23", "cardHolderName": "Jon Snow", "webhookUrl": "https://www.mywebhookurl" }, "currency": "GBP", "amountToCollect": "0.00", "recurrenceCriteria": { "recurrenceType": "Subscription", "recurringExpiry": "2034-11-08", "recurringFrequency": "12" } }
```

Example request for a recurring instalment payment

```
{
  "type": "Payment",
  "locale": "en_GB",
  "options": ["IsRecurringPaymentJobParent"],
  "paymentMethodsToUse": ["creditcard"],
  "parameters": {
    "cardNumber": "4000*****0002",
    "cardCvc": "123",
    "cardExpiryMonth": "05",
    "cardExpiryYear": "23",
    "cardHolderName": "Jon Snow",
    "webhookUrl": "https://www.mywebhookurl.com"
  },
  "currency": "GBP",
  "amountToCollect": "0.00",
  "recurrenceCriteria": {
    "recurrenceType": "Instalment",
    "recurringExpiry": "2023-12-08",
    "recurringFrequency": "13",
    "Instalments": "13"
  }
}
```

Example request for an unscheduled recurring payment

```
{
  "type": "Payment",
  "locale": "en_GB",
  "options": ["IsRecurringPaymentJobParent"],
  "paymentMethodsToUse": ["creditcard"],
  "parameters": {
    "cardNumber": "4000*****0002",
    "cardCvc": "123",
    "cardExpiryMonth": "05",
    "cardExpiryYear": "23",
    "cardHolderName": "Jon Snow",
    "webhookUrl": "https://www.mywebhookurl.com"
  },
  "currency": "GBP",
  "amountToCollect": "10.00",
  "recurrenceCriteria": {
    "recurrenceType": "Unscheduled"
  }
}
```

In some of these examples, the payment was a zero-amount authorisation. When you create a parent payment job, the amount can be zero but can also be the amount that you want to collect as the first payment.

In Cashflows Go, the transaction will show as a recurring **parent** payment in the Advanced tab of the Transaction details. For more information, refer to the [Cashflows Go Guide](#) (PDF) which is available from the [Cashflows Help Centre](#).

Example response

```
{
  "data": {
    "reference": "210221000411041792",
    "createDateTimeUtc": "2021-02-22T17:06:06.9100226Z",
    "type": "Payment",
    "traceReference": "210220104303388672",
    "configurationId": "200426117314086912",
    "domain": "cashflows.com",
    "locale": "en_GB",
    "timeZone": "Europe/London",
    "orderHistory": [],
    "paymentMethodsToUse": [
      "Card"
    ],
    "currency": "GBP",
    "amountToCollect": "0.00",
    "expirationDateTimeUtc": "2021-08-22T17:06:06.9100204Z",
    "dueDateTimeUtc": "2021-02-22T17:16:07.510655Z",
    "lastUpdateTimeUtc": "2021-02-22T17:06:06.9100242Z",
    "lastProcessedTimeUtc": "2021-02-22T17:06:06.9100234Z",
    "flags": {
      "recurringParent": true,
    }
  }
}
```

```

        "direct": true
    },
    "attributes": {},
    "paymentStatus": "Pending",
    "payments": [
        {
            "reference": "210221100327286784",
            "createDateTimeUtc": "2021-02-22T17:06:07.0457549Z",
            "paymentMethods": [
                "Card"
            ],
            "status": "Pending",
            "amountToCollect": "0.00",
            "steps": [
                {
                    "reference": "210221221533560840",
                    "createDateTimeUtc": "2021-02-22T17:06:07.5108252Z",
                    "action": "Start",
                    "paymentMethods": [
                        "Card"
                    ],
                    "status": "Pending",
                    "amountToCollect": "0.00"
                }
            ],
            "flags": {},
            "attributes": {
                "returnUrlSuccess":
"https://www.bing.com/?paymentjobref=210221000411041792&paymentref=210221100327286784",
                "returnUrlFailed":
"https://www.yahoo.co.uk/?paymentjobref=210221000411041792&paymentref=210221100327286784",
                "returnUrlCancelled":
"https://www.google.co.uk?paymentjobref=210221000411041792&paymentref=210221100327286784&status=cancelled",
                "cashFlowsAcquiringDetails":
                "{\\"ThreeDSecureVersion\\":\\"1.0.2\\",\\"ThreeDSecureVersionReason\\":\\"3-D Secure v2 not enabled for this merchant.\\"}"
            },
            "refunds": [],
            "captures": []
        }
    ],
    "links": {
        "data": {
            "url": "https://gateway-int.cashflows.com/api/gateway/payment-jobs/210221000411041792",
            "type": "application/json"
        },
        "action": {

```

```

      "url": "https://gateway-int.cashflows.com/payment/form-
post?ref=4ab07d818100e4880130c8e35d25ea1be01f7f9452408d235224886e479afa8719b43b45d88251cf73
bae8160e1bb551ca61ac1cbeab0c889200fe8199e49109",
      "type": "text/html"
    },
    "documentation": {
      "url": "https://gateway-int.cashflows.com/payment-gateway-
api/documentation/index.html",
      "type": "text/html"
    }
  }
}

```

Note: Unless a transaction is flagged as MOTO, you must still redirect the cardholder to complete the 3D Secure checks for the payment using the action URL provided above in the example response.

Required fields

Field	Description
amountToCollect	The total value of the payment transaction.
currency	The transaction currency.
IsRecurringPaymentJobParent	A flag to indicate that this payment job is a parent payment job for the purpose of a recurring payment
cardNumber	The number of the card that the customer is paying with. Note: This is mandatory unless a token is being used. If a token is being used, the field name is <i>token</i>
cardExpiryYear	The year when the card expires in the format YY (2 digits). For example, if the card expires in 2025, set this to 25.
cardExpiryMonth	The month when the card expires in the format MM {01-12}. For example, if the card expires in April, set this to 04
cardCvc	The security code on the back of the card.
cardholderName	The name on the card that the customer is paying with. Required for transactions that need to have 3DS checks applied. A request without a cardholderName, will result in an error response
recurrenceType	A string that can have one of the following values: <ul style="list-style-type: none"> Subscription Instalment Unscheduled
recurringExpiry	A date in the future after which the recurrence is no longer valid. The date format to use is yyyy-mm-dd, for example 2022-12-25. Not required for if recurrenceType is set to <i>Unscheduled</i>

Field	Description
recurringFrequency	The number of days between payments, for example 28. Not required if recurrenceType is set to <i>Unscheduled</i>
Instalments	The number of instalments. This value must match the value of recurringFrequency. This field is only required when recurrenceType is set to <i>Instalment</i>

Important: To comply with financial regulations, a payment request from a financial institution needs to include some extra information about the person who is receiving the funds. This includes payment requests for MOTO, parent and recurring transactions. You need to include the extra details in the recipientDetails object. For information, see [Additional details required for financial institutions](#).

Optional fields

Field	Description
orderNumber	The reference number that you generate to identify an order.
customerEmail	The email address of the customer.
locale	Determines the language that messages are displayed in. For example, to set the language to English, use the locale en-GB. Other options are: <ul style="list-style-type: none">el_GR (Greek)en_US (US English)nl_NL (Dutch)es_ES (Spanish) Tip: If your language is not available, please choose the most appropriate language for your customer s.

Response codes

After you have submitted a request to create a parent payment job, the Gateway API responds with a code. Ideally the response is a success code but can be any of the following.

Code	Description
201	Parent payment job created successfully.
400	Request contains errors.
401	Invalid token.
403	Insufficient permissions.
404	Configuration not found.
406	Bad response

How to create a recurring payment job

When you create the child payment job for the recurring payment, you must include the reference to the parent payment job to enable us to retrieve the card details to use for the payment. For information about creating a parent payment job, see [How to create a parent payment job](#).

When you create a child payment job, the recurrence type must match the original recurrence type provided in the parent payment job. Our gateway does not currently support scheduling. Therefore, you need to initiate the recurring payment with the required amount at the required time.

Example requests

The payment job request must include the parent payment job number for the default card or card selected by the customer, for example:

Example request for a child recurring subscription payment

```
{
  "amountToCollect": "10.00",
  "currency": "GBP",
  "locale": "en_GB",
  "parentPaymentJobReference": "200721021609123852",
  "order": {
    "orderNumber": "Payment 2"
  },
  "recurrenceCriteria": {
    "recurrenceType": "Subscription",
    "recurringExpiry": "2034-11-08",
    "recurringFrequency": "12"
  }
}
```

Example request for a child recurring instalment payment

```
{
  "amountToCollect": "10.00",
  "currency": "GBP",
  "locale": "en_GB",
  "parentPaymentJobReference": "200721021609123852",
  "order": {
    "orderNumber": "Payment 2"
  },
  "recurrenceCriteria": {
    "recurrenceType": "Instalment",
    "recurringExpiry": "2023-12-08",
    "recurringFrequency": "13",
    "Instalments": "13"
  }
}
```

Example request for a child recurring unscheduled payment

```
{
  "amountToCollect": "10.00",
  "currency": "GBP",
  "locale": "en_GB",
  "parentPaymentJobReference": "200721021609123852",
  "order": {
    "orderNumber": "Payment 2"
  },
  "recurrenceCriteria": {
    "recurrenceType": "Unscheduled"
  }
}
```

Important: To comply with financial regulations, a payment request from a financial institution needs to include some extra information about the person who is receiving the funds. This includes payment requests for MOTO, parent and recurring transactions. You need to include the extra details in the recipientDetails object. For information, see [Additional details required for financial institutions](#).

Example response

The response contains the payment status. There is no need to specify a notification webhook for a recurring child payment job:

```
{
  "data": {
    "reference": "200921017221943304",
    "createDateTimeUtc": "2020-09-10T14:20:32.5873637Z",
    "type": "Payment",
    "traceReference": "200920100402698252",
    "configurationId": "200426117314086912",
    "domain": "cashflows.com",
    "locale": "en_GB",
    "timeZone": "Europe/London",
    "order": {
      "orderNumber": "Payment 2",

```

```

        "createDateTimeUtc": "2020-09-10T14:20:32.5873662Z",
        "orderLines": []
    },
    "orderHistory": [],
    "parentPaymentJobReference": "200721021609123852",
    "paymentMethodsToUse": [
        "Card"
    ],
    "currency": "GBP",
    "amountToCollect": "10.00",
    "amountCollected": "10.00",
    "paidAmount": "10.00",
    "paidDateTimeUtc": "2020-09-10T14:20:33.763025Z",
    "expirationDateTimeUtc": "2021-03-10T14:20:32.5873618Z",
    "lastUpdateTimeUtc": "2020-09-10T14:20:33.7981683Z",
    "lastProcessedTimeUtc": "2020-09-10T14:20:32.5873645Z",
    "flags": {
        "direct": true
    },
    "attributes": {},
    "paymentStatus": "Paid",
    "payments": [
        {
            "reference": "200921100142737416",
            "createDateTimeUtc": "2020-09-10T14:20:32.8319012Z",
            "paymentMethods": [
                "Card"
            ],
            "status": "Paid",
            "amountToCollect": "10.00",
            "surchargeAmount": "0",
            "paidAmount": "10.00",
            "steps": [
                {
                    "reference": "200921217196650516",
                    "createDateTimeUtc": "2020-09-10T14:20:33.762769Z",
                    "action": "Start",
                    "paymentMethods": [
                        "Card"
                    ],
                    "status": "Paid",
                    "amountToCollect": "10.00"
                }
            ],
            "flags": {},
            "attributes": {
                "returnUrlSuccess": "https://gateway-
int.cashflows.com/payment?ref=4ab07d818100e4880130c8e35d25ea1b4131ec54744e457ba541445578fce
d03c977295fb58cd009e7944c69e6a8876cc1af0b024b99302aea53b8ca09aafe24",

```

```

"returnUrlFailed": "https://gateway-
int.cashflows.com/payment?ref=4ab07d818100e4880130c8e35d25ea1b4131ec54744e457ba541445578fce
d03c977295fb58cd009e7944c69e6a8876cc1af0b024b99302aea53b8ca09aafe24",
"returnUrlCancelled": "https://gateway-
int.cashflows.com/payment?ref=4ab07d818100e4880130c8e35d25ea1b4131ec54744e457ba541445578fce
d03c977295fb58cd009e7944c69e6a8876cc1af0b024b99302aea53b8ca09aafe24&status=cancelled",
"cashFlowsAcquiringDetails": "{\"AuthCode\":\"AUTHOK\",\"Arn\":\"745018
70254010013958712\",\"Message\":\"Authorised\",\"Status\":\"Successful\",\"IssuerResponseCo
de\":\"00\",\"CvvAvsResult\":\"000\",\"AcquirerResponseCode\":\"A\"}\",
"paymentMethodTransactionId": "01S00CECA74"

```

Required fields

Field	Description
amountToCollect	The total value of the payment transaction.
currency	The transaction currency.
parentPaymentJobReference	The unique reference number of the parent payment under for this is recurring child payment.
recurrenceType	A string that can have one of the following values: <ul style="list-style-type: none"> Subscription Instalment Unscheduled
recurringExpiry	A date in the future after which the recurrence is no longer valid. The date format to use is yyyy-mm-dd, for example 2022-12-25. Not required if recurrenceType is set to <i>Unscheduled</i>
recurringFrequency	The number of days between payments, for example 28. Not required if recurrenceType is set to <i>Unscheduled</i>
Instalments	The number of instalments. This value must match the value of recurringFrequency. This field is only required when recurrenceType is set to <i>Instalment</i>

Important: To comply with financial regulations, a payment request from a financial institution needs to include some extra information about the person who is receiving the funds. This includes payment requests for MOTO, parent and recurring transactions. You need to include the extra details in the recipientDetails object. For information, see [Additional details required for financial institutions](#).

Optional fields

Field	Description
orderNumber	The reference number that you generate to identify an order.
customerEmail	The email address of the customer.
locale	<p>Determines the language that messages are displayed in. For example, to set the language to English, use the locale en-GB. Other options are:</p> <ul style="list-style-type: none">• el_GR (Greek)• en_US (US English)• nl_NL (Dutch)• es_ES (Spanish) <p>Tip: If your language is not available, please choose the most appropriate language for your customer s.</p>

Response codes

After you have submitted a request to create a parent payment job, the Gateway API responds with a code. Ideally the response is a success code but can be any of the following.

Code	Description
201	Payment job created successfully.
400	Request contains errors.
401	Invalid token.
403	Insufficient permissions.
404	Configuration not found.
406	Bad response



Cancellation requests

If you need to cancel a payment, you can do this in Cashflows Go, as long as the payment has not been settled (which means that the funds have not been transferred yet). If you cancel a payment, you must cancel the full amount.

When you cancel a payment, you are deleting the request for the funds (the capture request). No funds are ever taken from the card. These requests for funds are batched up and submitted at midnight. Therefore, you can cancel a payment on the same day any time up until midnight. If you need to cancel a payment after midnight (not the same day), the funds will have been transferred and you need to refund the payment instead. For information, see [Refund requests](#).

Cancelling a payment and cancelling a payment job are not the same thing. If you cancel a payment but not the payment job, you can still use the payment job for submitting more payments in the future. For information, see [Cancellation requests](#).

How to cancel a payment

A request to cancel a payment request can only be processed before midnight on the same day when the payment was processed. You can only cancel a payment job for payments that have not been settled. If a payment has been settled, the only way to reverse it is with a refund. For information, see [Refund requests](#).

Example request to cancel a payment

The cancel payment has no message body. You just need to include the paymentJobReference and paymentReference in the URL, for example:

<https://gateway-int.cashflows.com//api/gateway/payment-jobs/210221017490247692/payments/210221117473470476/cancel>

Example response

```
{
  "data": {
    "reference": "210221117473470476",
    "createDateTimeUtc": "2021-02-24T14:05:08.475Z",
    "paymentMethods": [
      "Card"
    ],
    "status": "Cancelled",
    "amountToCollect": "10.00",
    "surchargeAmount": "0",
    "paidAmount": "10.00",
    "steps": [
      {
        "reference": "210221221667909660",
        "createDateTimeUtc": "2021-02-24T14:05:08.9Z",
        "action": "Start",
        "paymentMethods": [
          "Card"
        ],
        "status": "Pending",
        "amountToCollect": "10.00"
      }
    ]
  }
}
```

```

    },
    {
      "reference": "210221204563402752",
      "createDateTimeUtc": "2021-02-24T14:05:30.79Z",
      "action": "Process",
      "paymentMethods": [
        "Card"
      ],
      "status": "Paid",
      "amountToCollect": "10.00"
    },
    {
      "reference": "210221204596957184",
      "createDateTimeUtc": "2021-02-24T14:11:07.9139698Z",
      "action": "Cancel",
      "paymentMethods": [
        "Card"
      ],
      "status": "Cancelled",
      "amountToCollect": "10.00"
    }
  ],
  "flags": {},
  "attributes": {
    "returnUrlSuccess":
"https://www.mywebshop.com/?paymentjobref=210221017490247692&paymentref=210221117473470476&ordernumber=Payment+ref+D1C",
    "returnUrlFailed":
"https://www.mywebshop.com/?paymentjobref=210221017490247692&paymentref=210221117473470476&ordernumber=Payment+ref+D1C",
    "returnUrlCancelled":
"https://www.mywebshop.com?paymentjobref=210221017490247692&paymentref=210221117473470476&ordernumber=Payment+ref+D1C&status=cancelled",
    "cashFlowsAcquiringDetails":
    "{ \"ThreeDSecureVersion\": \"1.0.2\", \"ThreeDSecureVersionReason\": \"3-D Secure v2 not enabled for this merchant.\", \"AuthenticationStatus\": \"Y\", \"Xid\": \"0Kbcw53GnooWrEjdo1T3f1iBbb0=\", \"Cavv\": \"7EmWG0mKzy1eEJP1890fUwX9S9T=\", \"Eci\": \"05\", \"AuthCode\": \"AUTHOK\", \"Arn\": \"74501871055010015749357\", \"Message\": \"Authorised\", \"Status\": \"Successful\", \"IssuerResponseCode\": \"00\", \"CvvAvsResult\": \"200\", \"AcquirerResponseCode\": \"A\", \"TruncatedCardNumber\": \"400000*****0002\" }",
    "originatingIpAddress": "86.167.78.143, 23.200.87.37, 88.221.114.222",
    "originHeader": ""https://integration.cashflows.com"",
    "paymentMethodTransactionId": "01S00DB3211",
    "paymentMethodVoidTransactionId": "01V00DB322B"
  },
  "refunds": [],
  "captures": []
}
}

```

How to cancel a payment job

A payment job can remain on the Cashflows Gateway for six months before it expires so it's good housekeeping to cancel any payment jobs that are no longer in use.

Tip: If you want a payment job to expire sooner than six months, you can set an expiry date when you create the payment job. Here's an example that includes an expiration date and time:

```
{
  "type": "Payment",
  "paymentMethodsToUse": ["creditcard"],
  "parameters": {
    "cardNumber": "4000000000000002",
    "cardCvc": "123",
    "cardExpiryMonth": "05",
    "cardExpiryYear": "23"
  },
  "order": {
    "orderNumber": "Payment ref D1E"
  },
  "currency": "GBP",
  "amountToCollect": "10.00",
  "expirationDateTimeUtc": "2021-01-20T16:50:01"
}
```

It's also good practice to cancel a payment job to prevent misuse and ensure that that it can't be used for any other tasks. When you can cancel a payment job, it will not be possible to submit any more payments using the same payment job.

Note: Cancelling a payment job does not cancel completed payments.

Example request to cancel a payment job

PATCH <https://gateway-int.cashflows.com/api/gateway/payment-jobs/{paymentJobReference}/cancel>

Example response

```
{
  "data": {
    "reference": "210121017238589452",
    "createDateTimeUtc": "2021-01-14T10:32:50.506Z",
    "type": "Payment",
    "traceReference": "210120117364553808",
    "configurationId": "200426117314086912",
    "domain": "cashflows.com",
    "locale": "en_GB",
    "timeZone": "Europe/London",
    "order": {
      "orderNumber": "Your ref",
      "createDateTimeUtc": "2021-01-14T10:32:50.506Z",
      "billingAddress": {
        "firstName": "Alex",
        "lastName": "Smith"
      },
      "billingIdentity": {
        "emailAddress": "alex@test.com"
      },
      "orderLines": []
    },
    "orderHistory": [],
    "paymentMethodsToUse": [
      "Card"
    ],
    "currency": "GBP",
    "amountToCollect": "10.00",
  }
}
```

```

"expirationDateTimeUtc": "2021-07-14T10:32:50.506Z",
"lastUpdateTimeUtc": "2021-01-14T15:10:59.0720383Z",
"lastProcessedTimeUtc": "2021-01-14T10:32:50.506Z",
"flags": {
  "createdOnMapi": true
},
"attributes": {},
"paymentStatus": "Cancelled",
"payments": [
  {
    "reference": "210121117372807180",
    "createDateTimeUtc": "2021-01-14T10:32:50.677Z",
    "paymentMethods": [
      "Card"
    ],
    "status": "Cancelled",
    "amountToCollect": "10.00",
    "steps": [
      {
        "reference": "210121217372942352",
        "createDateTimeUtc": "2021-01-14T10:32:50.73Z",
        "action": "DisplayHostedPage",
        "paymentMethods": [
          "Card"
        ],
        "status": "Pending",
        "amountToCollect": "10.00"
      },
      {
        "reference": "210121217339387924",
        "createDateTimeUtc": "2021-01-14T15:10:59.0479346Z",
        "action": "Cancel",
        "paymentMethods": [
          "Card"
        ],
        "status": "Cancelled",
        "amountToCollect": "10.00"
      }
    ]
  },
  {
    "reference": "210121217339387924",
    "createDateTimeUtc": "2021-01-14T15:10:59.0479346Z",
    "action": "Cancel",
    "paymentMethods": [
      "Card"
    ],
    "status": "Cancelled",
    "amountToCollect": "10.00"
  }
],
"flags": {},
"attributes": {
  "returnUrlSuccess":
"https://www.mywebshop.com/?paymentjobref=210121017238589452&paymentref=210121117372807180&ordernumber=Your+ref",
  "returnUrlFailed":
"https://www.mywebshop.com/?paymentjobref=210121017238589452&paymentref=210121117372807180&ordernumber=Your+ref",
  "returnUrlCancelled":
"https://www.mywebshop.com?paymentjobref=210121017238589452&paymentref=210121117372807180&ordernumber=Your+ref&status=cancelled"
},

```



```

    "refunds": [],
    "captures": []
  }
]
}
}

```

Required fields

Field	Description
paymentJobReference	The reference of the payment job to cancel.
paymentReference	The reference of the payment to cancel.
configurationId	Your configuration ID.
hash	A hexadecimal sha512 hash of your password plus the body.

Optional fields

Field	Description
locale	<p>Determines the language that messages are displayed in. For example, to set the language to English, use the locale en-GB. Other options are:</p> <ul style="list-style-type: none"> el_GR (Greek) en_US (US English) nl_NL (Dutch) es_ES (Spanish) <p>Tip: If your language is not available, please choose the most appropriate language for your customer s</p>

Response codes

Code	Description
200	Payment or payment job successfully cancelled.
400	Request contains errors.
401	Invalid token.
403	Insufficient permissions.
404	Configuration, payment job or payment not found.
406	Bad response



Refund requests

Occasionally it might be necessary to refund a payment, for example if a customer returns an item. You can make a refund via Cashflows Go. For information, refer to the *Cashflows Go Guide*. Alternatively, you can use an API call to the Cashflows Gateway.

How to request a refund

To refund a payment, you need the *paymentJobReference* and *paymentReference* of the payment job that was used to make the original payment.

Note: A payment job can include multiple payments. However, you cannot refund in one call more than the amount that was paid using the payment method that is specified in the payment job that the *paymentReference* refers to.

Example request

POST <https://gateway-int.cashflows.com/api/gateway/payment-jobs/{paymentJobReference}/payments/{paymentReference}/refunds>

```
{"amountToRefund": "10.00", "refundNumber" : "Your refund reference"}
```

Example response

```
{
  "data": {
    "reference": "210123000142606340",
    "createDateTimeUtc": "2021-01-14T15:21:56.9346867Z",
    "refundNumber": "Your refund reference",
    "status": "Completed",
    "amountToRefund": "10.00",
    "steps": [
      {
        "reference": "210123100142606340",
        "createDateTimeUtc": "2021-01-14T15:21:57.6097637Z",
        "action": "Start",
        "status": "Completed",
        "resultAttributes": {}
      }
    ]
  },
}
```

```

    "attributes": {
      "cashFlowsAcquiringDetails":
        "{ \"ThreeDSecureVersion\": \"1.0.2\", \"ThreeDSecureVersionReason\": \"3-D Secure v2 not
        enabled for this
        merchant.\", \"AuthenticationStatus\": \"Y\", \"Xid\": \"17TnAA8FZXc4eYiMEvUE1CauPu1=\", \"Cavv\
        \": \"jqvNMAuNmKZJdA878z9A7PsPvTR=\", \"Eci\": \"05\", \"AuthCode\": \"116\", \"Arn\": \"\", \"Messa
        ge\": \"Authorised\", \"Status\": \"Successful\", \"IssuerResponseCode\": \"\", \"CvvAvsResult\":
        \"222\", \"AcquirerResponseCode\": \"A\", \"TruncatedCardNumber\": \"400000*****0002\" }\",
      "paymentMethodTransactionId": "01R00D76D2C"
    }
  }
}

```

Required fields

Field	Description
paymentJobReference	The reference of the payment job to create a refund for. Integer(\$int64)
paymentReference	The reference of the payment to create a refund for. Integer(\$int64)
configurationId	Your configuration ID.
hash	A hexadecimal sha512 hash of your password plus the body.

Optional fields

Field	Description
locale string (query)	Determines the language that messages are displayed in. For example, to set the language to English, use the locale en-GB. Other options are: <ul style="list-style-type: none"> el_GR (Greek) en_US (US English) nl_NL (Dutch) es_ES (Spanish)

Tip: If your language is not available, please choose the most appropriate language for your customer s

Response codes

Code	Description
201	Refund created successfully.
400	Request contains errors.
401	Invalid token.
403	Insufficient permissions.
404	Configuration, payment job or payment not found.
406	Bad response



Capture requests

The payment process for a card transaction involves the following stages:

- **Authorisation**
This is when a customer's payment is validated to ensure that they can pay the requested amount. The payment is reserved for you (the business owner) but the funds are not actually taken from the customer's account.
- **Capture**
The bank receives a capture request from you. This indicates to the bank that you are ready to ship goods or provide your services to the customer. The bank then charges the customer's payment card for the goods or services that they are buying. If the bank does not receive a capture request, the bank releases the reserved funds typically after five to seven days.

Our Cashflows Gateway takes care of the capture stage. By default, funds are automatically captured for the payments that we process for you. Cashflows Go has an option called Auto Capture. When this option is enabled, we send both an authorisation (to reserve the funds on the card) and a capture request (for the funds to be transferred) to the customer's bank. By default, Auto Capture is enabled but you can disable it at any time.

Depending on the nature of the business, it might be necessary for you to defer the capture of the funds until the customer is ready to pay for the service. For example, if the business offers services that customers book ahead and pay for later when or after they receive the service. Examples of such transactions are appointments for wellbeing or trades services or advance bookings where a deposit is taken.

To defer the capture stage, you need to:

1. Disable Auto Capture in Cashflows Go. For information, see [How to disable automatic capture for all payments](#).
2. Create a capture request with an API call within seven days. For information, see [How to create a capture request](#).

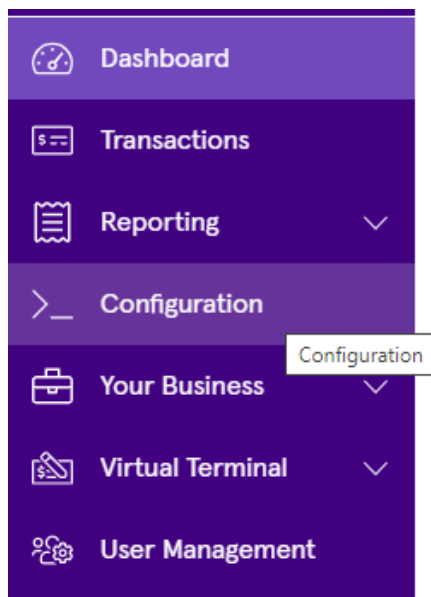
Important: If you don't send the capture request within seven days, there is no guarantee that the customer will still have the funds in their account and so your business may not be paid.

How to disable automatic capture for all payments

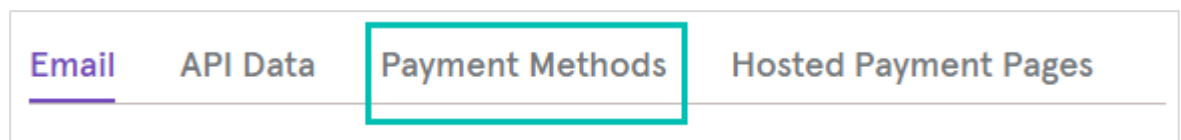
Note: The steps that follow apply to all transactions. If you want to defer capture for an individual payment, you need to use create a capture request with an API call. For information, see [How to create a capture request](#).

To disable Auto Capture:

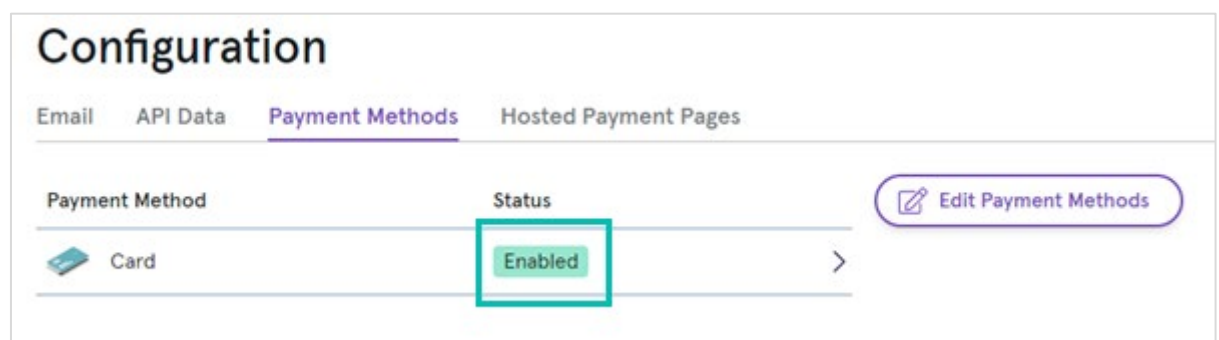
1. Sign into [Cashflows Go](#). If you don't know how to sign in, you can find step-by-step instructions in the Cashflows Help Cent.
2. From the Cashflows Go menu, select **Configuration**.



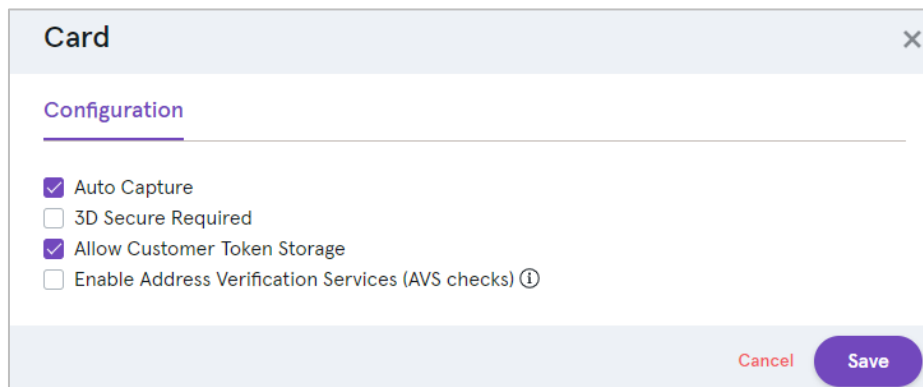
3. Select **Payment Methods**.



4. Select **Enabled**.



The card settings are displayed:



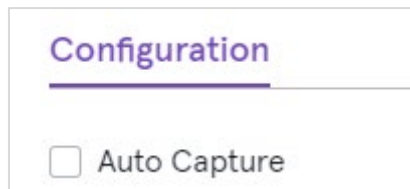
Card

Configuration

- ☒ Auto Capture
- ☐ 3D Secure Required
- ☒ Allow Customer Token Storage
- ☐ Enable Address Verification Services (AVS checks) ⓘ

Cancel Save

5. Clear the Auto Capture check box.



Configuration

☐ Auto Capture

6. Select **Save**.
7. From now on, only an authorisation request will be sent. This will reserve funds on the card but the payment will not be completed. To complete the payment, you need to issue a separate capture request within seven days using an API call via the Cashflows Gateway. For information, see [How to create a capture request](#).

How to create a capture request

If you disable Auto Capture, we send an authorisation request to reserve funds on the card, but the payment will not be completed. To complete the payment, you need to issue a separate capture request within seven days using an API call via the Cashflows Gateway.

Example request

POST <https://gateway-int.cashflows.com/api/gateway/payment-jobs/{paymentJobReference}/payments/{paymentReference}/captures>

```
{"amountToCapture": "10", "isFinalCapture": "true"}
```

Example response

```
{
  "data": {
    "reference": "210123500033554432",
    "createDateTimeUtc": "2021-01-14T15:18:27.1360974Z",
    "status": "Completed",
    "amountToCapture": "10",
    "isFinalCapture": true,
    "attributes": {
      "paymentMethodTransactionId": "01S00D76D1A"
    }
  }
}
```

Required fields

Field	Description
paymentJobReference	The reference of the payment job to capture.
paymentReference	The reference of the payment to create a capture for.
configurationId	Your configuration ID.
hash	A hexadecimal sha512 hash of your password plus the body.

Optional fields

Field	Description
locale	Determines the language that messages are displayed in. For example, to set the language to English, use the locale en-GB. Other options are: <ul style="list-style-type: none">• el_GR (Greek)• en_US (US English)• nl_NL (Dutch)• es_ES (Spanish) <p>Tip: If your language is not available, please choose the most appropriate language for your customers</p>

Response codes

Code	Description
200	Payment or payment job successfully cancelled.
400	Request contains errors.
401	Invalid token.
403	Insufficient permissions.
404	Configuration or payment job or payment not found.
406	Bad response



Managing payment links

You can use an action URL from a request response as a payment link to send to customers so that they can pay via a to a secure online payment page.

Using our API and some coding, you can take a payment link and:

- Embed it into a text message or chat , for example to request a deposit, complete a booking, send a quotation or send a reminder to chase up a payment.
- Generate a QR code for an invoice
- Turn it into a payment button



Address Verification Service (AVS) checks

The Address Verification Service (AVS) is a fraud-prevention service that banks can subscribe to. This service is generally used in the UK, US, and Canada. AVS uses the address details that a customer provides to verify that the address registered to the card that they are paying with is valid and matches the address that the bank has on record.

If a customer's bank subscribes to the Address Verification Service (AVS), their bank confirms to us (and you, the business owner) whether or not the address matches. You can choose whether or not to review any transactions that fail AVS checks. AVS checking is not enabled by default. You can enable it in Cashflows Go.

Card

Configuration

- ☒ Auto Capture
- ☐ 3D Secure Required
- ☐ Allow Apple Pay
- ☐ Allow Google Pay
- ☒ Allow Customer Token Storage
- ☐ Review transactions that fail AVS checks ⓘ

Important: Enabling AVS checks needs careful consideration. You need to understand the checks that this carries out the checks and responses that you might receive as a result of those checks. We recommend that you enable this option only if you are confident in your knowledge of payment processing.

For more information, contact our [Technical Support team](#) or your account manager.

Response codes

Code	Description
24	2 - address matched 4 - postcode not matched)
42	4 - address not matched 2 - postcode matched
44	4 - address not matched 4 - postcode not matched



Testing and going live

To enable you to test your integration before going live, we have an integration environment where you can simulate different payment scenarios. We also provide some test cards that you can use.

For information about testing your integration and preparing to go live, refer to [Getting started with the Cashflows Gateway API](#) (PDF) which is available from the [Cashflows Help Centre](#)



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