



COLLECTING SOLUTION

Adding the Bancontact payment button

Implementation Guide

Document version 1.5

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1. HISTORY OF THE DOCUMENT

Version	Author	Date	Comment
1.5	Lyra Collect	4/18/2022	<ul style="list-style-type: none">• Update of the chapter <i>Creating a Bancontact payment request</i>.
1.4	Lyra Collect	1/12/2021	<ul style="list-style-type: none">• Update of the payment workflow.• Update of the chapter <i>Processing the response data</i>.
1.3	Lyra Collect	11/2/2020	<ul style="list-style-type: none">• Update of error codes in the <i>Processing errors</i> chapter.• Update of the <i>Technical information</i> chapter.• Update of the refund process.
1.2	Lyra Collect	1/24/2020	<ul style="list-style-type: none">• Update of the CAPTURED status description.• Update of additional information.• Integration by iframe not supported.
1.1	Lyra Collect	9/30/2019	Update of available operations.
1.0	Lyra Collect	9/9/2019	Initial version

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2. PRESENTATION



Bancontact is an easy, fast and secure debit card payment method. With more than 15 million cardholders, it is the most frequently used payment method in Belgium.



Supported currencies

- EUR



Supported countries

- Belgium



Additional information

- Debit is immediate (no capture delay).
- Transaction validation is automatic (no manual validation).
- No capture file is sent to the acquirer.

3. TECHNICAL INFORMATION

Field valuesvads_card_brand	Supported currencies	Supported countries	Authorization validity period	Payment process
BANCONTACT	EUR	BE	0	Immediate capture

Sales channel	
e-commerce	✓
m-commerce	✗
MOTO payment	✗
Interactive Voice Server	✗
Payment order by e-mail/SMS	✓
Payment order by WhatsApp	✓

Operations with transactions	
Cancellation	✗
Refund	✓
Modification	✗
Validation	✗
Duplication	✗
Manual reconciliation	✓

Type of integration	
Redirection	✓
Iframe	✗
JavaScript Client	✗
Data collection form	✓
MarketPlace	✗
API Web Services	✗
Mobile SDK	✗
Back Office	✗
WhatsApp	✗

Payment type	
Immediate payment	✓
Deferred payment	✗
Payment in installments	✗
Payment by subscription	✗
Payment by file (token or batch)	✗
One-click payment	✗
Payment by wallet	✗

Miscellaneous	
Reporting	✓
Transaction settlement	✓
Chargeback settlement	✓
Extra payment attempts	✗

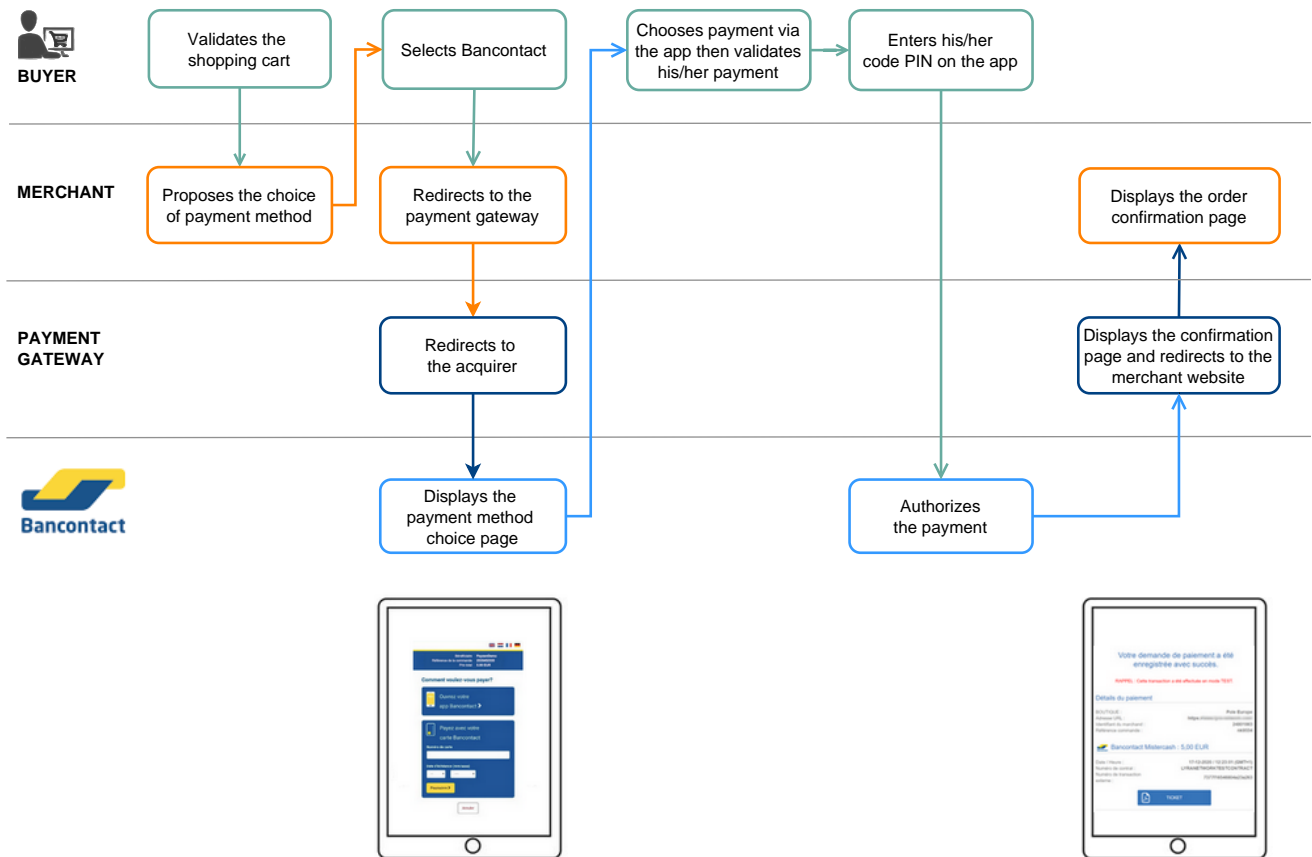
4. PREREQUISITES

In order to enable the Bancontact payment method:

1. Contact the Middle Office.
2. Fill out and send the **KYC** and **Merchant Registration Form**.
3. Once all the documents have been validated, the Bancontact payment method will be enabled for your shop.

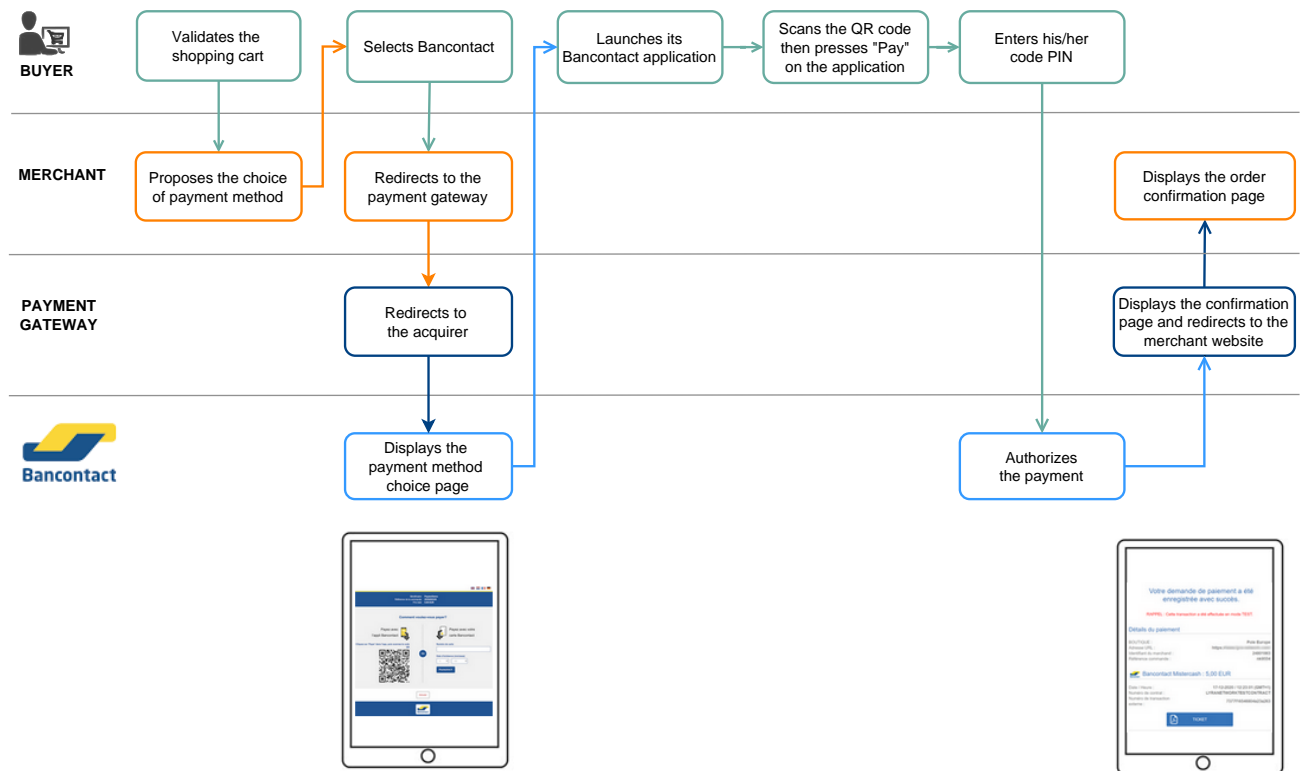
5. PAYMENT PROCESS

5.1. On a smartphone or tablet using the Bancontact payment application



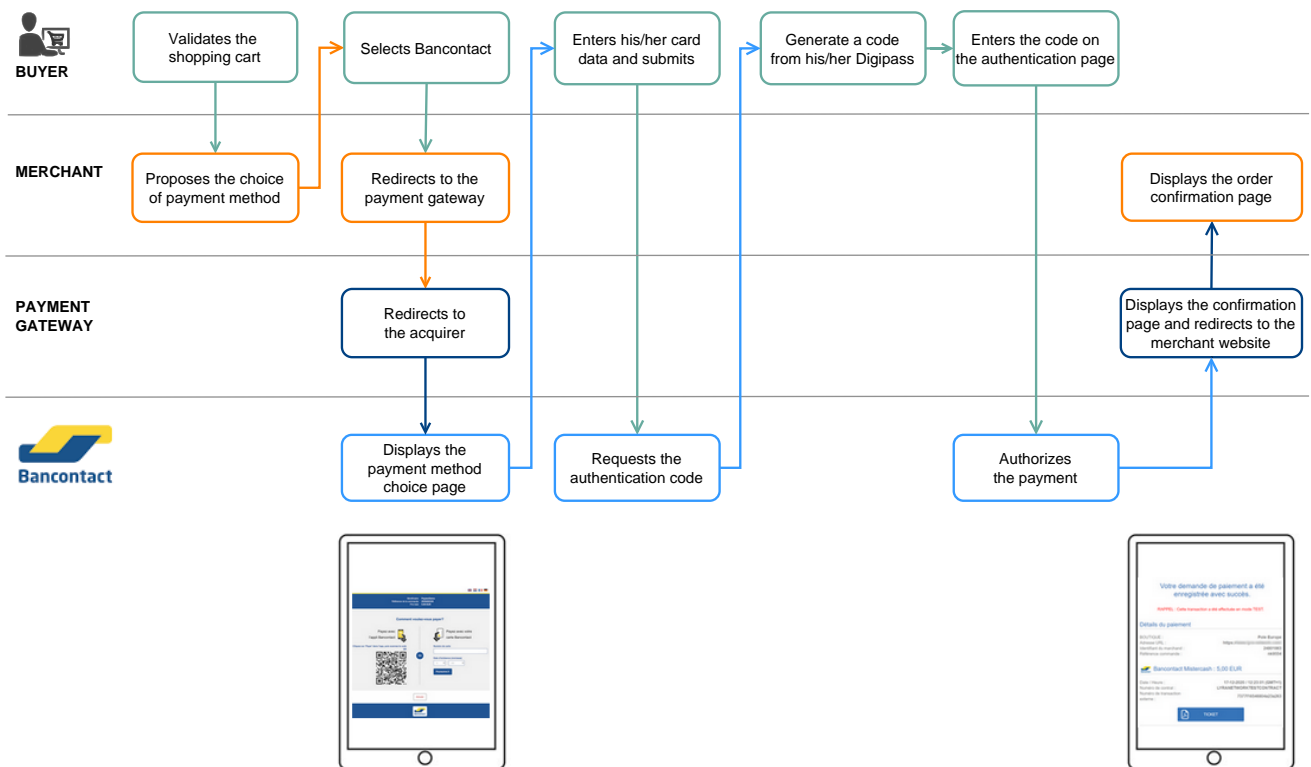
1. The buyer finalizes their cart and chooses to pay for their purchases with Bancontact.
2. The merchant website redirects the buyer to the payment gateway.
3. If all the parameters are present, the buyer is redirected to the Bancontact page, otherwise an intermediary page is presented to allow them to enter their information.
4. The buyer chooses to pay via the Bancontact payment application.
5. The application displays the payment details. The buyer confirms the payment and enters their PIN code.
6. The application redirects the buyer to the payment page.
7. The payment gateway displays the payment receipt and redirects the buyer to the merchant website.

5.2. On a computer by scanning the QR code



1. The buyer finalizes their cart and chooses to pay for their purchases with Bancontact.
2. The merchant website redirects the buyer to the payment gateway.
3. If all the parameters are present, the buyer is redirected to the Bancontact page, otherwise an intermediary page is presented to allow them to enter their information.
4. The buyer chooses to pay with their smartphone. For this, they launch the Bancontact payment application.
5. The buyer scans the QR code and confirms the payment via the Bancontact payment application.
6. The buyer enters their PIN code in the application to authenticate him/herself.
7. The application redirects the buyer to the payment page.
8. The payment gateway displays the payment receipt and redirects the buyer to the merchant website.

5.3. On a computer by entering card details



1. The buyer finalizes their cart and chooses to pay for their purchases with Bancontact.
2. The merchant website redirects the buyer to the payment gateway.
3. If all the parameters are present, the buyer is redirected to the Bancontact page, otherwise an intermediary page is presented to allow them to enter their information.
4. The buyer enters their card data and confirms the entry.
5. The buyer is redirected to the 3D Secure authentication page.
6. The buyer turns on their Digipass card reader. They enter their PIN code on the Digipass and obtain an authentication code.
7. The buyer authenticates him/herself on the 3D Secure page by entering the code generated by their Digipass device.
8. Once the payment is accepted, the buyer is redirected to the payment page.
9. The payment gateway displays the payment receipt and redirects the buyer to the merchant website.

6. TRANSACTION SETTLEMENT

Bancontact transactions are supported by the following services:

- Visual transaction reconciliation
- Visual chargeback reconciliation
- Bank reconciliation report
- Chargeback reconciliation report

If you wish to enable or obtain more information on these services, contact the Middle Office.

7. ESTABLISHING INTERACTION WITH THE PAYMENT GATEWAY

The interaction with the payment gateway is described in the *Hosted Payment Page Implementation Guide*, available in our online documentation archive.

The merchant website and the payment gateway interact by exchanging data.

To create a payment, this data is sent in an HTML form via the buyer's browser.

At the end of the payment, the result is transmitted to the merchant website in two ways:

- automatically by means of notifications called Instant Notification URLs (also known as IPN or Instant Payment Notification).
- Via the browser when the buyer clicks the button to return to the merchant website.

To guarantee the security of the exchange, the data is signed with a key known only to the merchant and the payment gateway.

8. SETTING UP NOTIFICATIONS

There are several types of notifications provided in the Expert Back Office.

- Instant Payment Notification URL call
- E-mail sent to the merchant
- E-mail sent to the buyer
- SMS sent to the merchant
- SMS sent to the buyer

They allow to manage the events (payment accepted, payment abandoned by the buyer, payment canceled by the merchant, payment validated by the merchant, etc.) that will trigger a notification sent to the merchant website, the merchant or the buyer.

The notifications of Instant Payment Notification URL call type are very important as they represent the only reliable way for the merchant website to obtain the payment result.

If the payment gateway is unable to access the URL of your page, an e-mail will be sent to the shop administrator.

It contains:

- The HTTP code of the encountered error,
- Parts of error analysis,
- Its consequences,
- Instructions via the Expert Back Office to resend the request to the previously defined URL.

To access notification rule management:

1. Sign in to your Merchant Back Office available at this address:
<https://secure.lyra.com/portal/>
2. Click **Other actions** to access Expert Back Office.
3. Go to the following menu: **Settings > Notification rules.**

Instant Payment Notification		<input checked="" type="checkbox"/> E-mail sent to the merchant	<input checked="" type="checkbox"/> E-mail sent to the buyer
Enabled		Reference	
<input type="checkbox"/>		Instant Payment Notification URL on batch authorization	
<input checked="" type="checkbox"/>		Instant Payment Notification URL at the end of the payment	
<input type="checkbox"/>		Instant Payment Notification URL on batch change	
<input type="checkbox"/>		Instant Payment Notification URL on cancellation	
<input type="checkbox"/>		Instant Payment Notification URL on an operation coming from the Back Office	

8.1. Setting up the Instant Payment Notification

This rule allows to notify the merchant website in the following cases:

- Payment accepted
- Payment declined
- Payment waiting for authorization (file analysis is in progress)

This notification is required to communicate the result of the payment request.

It will inform the merchant website of the payment result even if your client has not clicked the “Return to the shop” button.

1. Right-click **Instant Payment Notification URL at the end of the payment.**
2. Select **Manage the rule.**
3. Enter the **E-mail address(es) to notify in case of failure** field in the **General settings** section.
To specify several e-mail addresses, separate them with a semi-colon.
4. Check the box **Automatic retry in case of failure** if you wish to authorize the gateway to automatically resend the notification in case of a failure (can be done up to 4 times).
5. In the **Instant Payment Notification URL of the API form V1, V2** section, specify the URL of your page in the fields **URL to notify in TEST mode** and **URL to notify in PRODUCTION mode** if you wish to receive notifications in the API form format.
6. Save the changes.

8.2. Setting up a notification on batch change

In some cases, the final payment result may not be available when the buyer returns to the merchant website.

The payment is then created with the **Waiting for authorization** status.

An automatic mechanism allows to retrieve the final status and update the transaction.

In order to be notified of the final status, you must enable the notification rule for batch modification:

1. Right-click **Instant Payment Notification URL on batch change.**
2. Select **Manage the rule.**
3. Enter the **E-mail address(es) to notify in case of failure** field in the **General settings** section.
To specify several e-mail addresses, separate them with a semi-colon.
4. Check the box **Automatic retry in case of failure** if you wish to authorize the gateway to automatically resend the notification in case of a failure (can be done up to 4 times).
5. In the **Instant Payment Notification URL of the API form V1, V2** section, specify the URL of your page in the fields **URL to notify in TEST mode** and **URL to notify in PRODUCTION mode** if you wish to receive notifications in the API form format.
6. In the **REST API Instant Payment Notification URL** section, specify the URL of your page in the fields **Target URL of the IPN to notify in TEST mode** and **Target URL of the IPN to notify in PRODUCTION mode** if you are using the clientJavaScript.
7. Save the changes.
8. Enable the rule by right-clicking **Instant Payment Notification URL on batch change** and select **Enable the rule.**

9. GENERATING A PAYMENT FORM

To generate a payment request, you must create an HTML form as follows:

```
<form method="POST" action="https://secure.lyra.com/vads-payment/">
  <input type="hidden" name="parameter1" value="value1" />
  <input type="hidden" name="parameter2" value="value2" />
  <input type="hidden" name="parameter3" value="value3" />
  <input type="hidden" name="signature" value="signature"/>
  <input type="submit" name="pay" value="Pay"/>
</form>
```

It contains:

- The following technical elements:
 - The `<form>` and `</form>` tags that allow to create an HTML form.
 - The `method="POST"` attribute that defines the method used for sending data.
 - The `action="https://secure.lyra.com/vads-payment/"` attribute that defines where to send the form data.
- Form data:
 - The shop ID.
 - Information about the payment depending on the use case.
 - Additional information depending on your needs.
 - The signature that ensures the integrity of the form.

This data is added to the form by using the `<input>` tag:

```
<input type="hidden" name="parameter1" value="value1" />
```

For setting the `name` and `value` attributes, see the **Data dictionary** chapter also available in the online document archive.

All the data in the form must be encoded in **UTF-8**.

This will allow for the special characters (accents, punctuation marks, etc.) to be correctly interpreted by the payment gateway. Otherwise, the signature will be computed incorrectly and the form will be rejected.

- The **Pay** button for submitting the data:

```
<input type="submit" name="pay" value="Pay"/>
```

Different use cases are presented in the chapters below. This information will allow you to adapt your payment form to your needs.

The following table lists the different formats that you can encounter when building your form.

Notation	Description
a	Alphabetic characters (from 'A' to 'Z' and from 'a' to 'z')
n	Numeric characters
s	Special characters
an	Alphanumeric characters
ans	Alphanumeric and special characters (except '<' and '>')
3	Fixed length of 3 characters
..12	Variable length up to 12 characters
json	<p>JavaScript Object Notation. Object containing key/value pairs separated by commas. It starts with a left brace "{" and ends with a right brace "}". Each key / value pair contains the name of the key between double-quotes followed by ":", followed by a value. The name of the key must be alphanumeric. The value can be:</p> <ul style="list-style-type: none"> • a character string (in this case it must be framed by double quotes) • a number • an object • a table • a boolean • empty <p>Example: {"name1":45,"name2":"value2", "name3":false}</p>
bool	Boolean. Can be populated with the true or false value.
enum	Characterizes a field with a complete list of values. The list of possible values is given in the field definition.
Enum list	<p>List of values separated by a " ; ". The list of possible values is given in the field definition. Example: vads_payment_cards=VISA;MASTERCARD</p>
map	<p>List of key / value pairs separated by a " ; ". Each key / value pair contains the name of the key followed by "=", followed by a value. The value can be:</p> <ul style="list-style-type: none"> • a chain of characters • a boolean • a json object • an xml object <p>The list of possible values for each key/value pair is provided in the field definition. Example: vads_theme_config=SIMPLIFIED_DISPLAY=true;RESPONSIVE_MODEL=Model_1</p>

9.1. Creating a Bancontact payment request

1. Use all the fields presented in the table below to create your payment form.

Field name	Description	Format	Value
vads_payment_cards	Allows to force the card type to be used. Leave empty to let the Buyer choose between the eligible payment methods (depending on the currency, the minimum or maximum amount, the technical constraints) associated with the shop.	enum	<ul style="list-style-type: none">• BANCONTACT to directly call the Bancontact payment button.• VISA;BANCONTACT to provide the choice between VISA and Bancontact.
vads_page_action	Action to perform	enum	PAYMENT
vads_amount	Payment amount in the smallest currency unit (cents for euro)	n..12	E.g.: 4525 for EUR 45.25
vads_ctx_mode	Mode of interaction with the payment gateway	enum	TEST or PRODUCTION
vads_currency	Numeric currency code to be used for the payment, in compliance with the ISO 4217 standard (numeric code).	n3	Possible values: <ul style="list-style-type: none">• 978 (EUR)
vads_action_mode	Acquisition mode for payment method data	enum	INTERACTIVE
vads_cust_email	Buyer's e-mail address	ans..150	E.g.: ABC@example.com
vads_cust_city	City	an..128	E.g.: Bruxelles
vads_cust_country	Country code in compliance with the ISO 3166 alpha-2 standard	a2	Possible value: BE
vads_cust_first_name	First name	ans..63	E.g.: Laurent
vads_cust_last_name	Last name	ans..63	E.g.: Durant
vads_payment_config	Payment type	enum	SINGLE
vads_site_id	Shop ID	n8	E.g.: 12345678
vads_trans_date	Date and time of the payment form in UTC format	n14	Respect the YYYYMMDDHHMMSS format E.g.: 20200101130025
vads_trans_id	Transaction number. Must be unique within the same day (from 00:00:00 UTC to 23:59:59 UTC). Warning: this field is not case sensitive.	an6	E.g.: xrT15p
vads_version	Version of the exchange protocol with the payment gateway	enum	V2

2. Add optional fields according to your requirements (see **Using additional features** chapter of the [Implementation Guide Hosted Payment Page](#)).
3. Compute the value of the **signature** field using all the fields of your form that start with **vads_** (see chapter **Computing the signature** of the [Implementation Guide Hosted Payment Page](#) available on our website).

10. SENDING THE PAYMENT REQUEST

The buyer will be able to finalize his/her purchase once he/she is redirected to the payment page.

The buyer's browser must transmit the payment form data.

10.1. Redirecting the buyer to the payment page

The URL of the payment gateway is:

<https://secure.lyra.com/vads-payment/>

Example of parameters sent to the payment gateway:

```
<form method="POST" action="https://secure.lyra.com/vads-payment/">
<input type="hidden" name="vads_action_mode" value="INTERACTIVE" />
<input type="hidden" name="vads_amount" value="2990" />
<input type="hidden" name="vads_ctx_mode" value="TEST" />
<input type="hidden" name="vads_currency" value="978" />
<input type="hidden" name="vads_cust_country" value="BE" />
<input type="hidden" name="vads_cust_email" value="me@example.com" />
<input type="hidden" name="vads_cust_first_name" value="John" />
<input type="hidden" name="vads_cust_last_name" value="Doe" />
<input type="hidden" name="vads_cust_phone" value="+33102030405" />
<input type="hidden" name="vads_page_action" value="PAYMENT" />
<input type="hidden" name="vads_payment_cards" value="BANCONTACT" />
<input type="hidden" name="vads_payment_config" value="SINGLE" />
<input type="hidden" name="vads_site_id" value="12345678" />
<input type="hidden" name="vads_trans_date" value="20190710101407" />
<input type="hidden" name="vads_trans_id" value="362812" />
<input type="hidden" name="vads_version" value="v2" />
<input type="hidden" name="signature" value="NM25DPLKEbtGEHCDHn8MBT4ki6aJI/ODaWhCzCnAfvY=" />
<input type="submit" name="pay" value="Pay"/>
</form>
```

10.2. Processing errors

If the payment gateway detects an error while receiving the form, an error message will appear and the buyer will not be able to proceed to the payment.

In TEST mode

The message indicates the source of the error and provides a link to the error code description to help you fix it.

In PRODUCTION mode

The message simply indicates to the buyer that a technical problem has occurred.

In both cases the merchant receives a notification e-mail.

It contains:

- the source of the error,
- a link to possible causes to facilitate its analysis,
- all the fields of the form.

A description of the error codes with their possible causes is available on our website

<https://docs.lyra.com/fr/collect/error-code/error-00.html>

Error codes specific to the BANCONTACT payment method:

Code	Message	Description of the error
10104	UNAVAILABLE_PAYMENT_METHOD	The BANCONTACT card type is not activated for your Merchant ID.
10124	CURRENCY_NOT_SUPPORTED	No card type supports the requested currency.
10197	LYRA_COLLECT_METHOD_NOT_AVAILABLE_IN_COUNTRY	No card type supports the requested country.

11. ANALYZING THE PAYMENT RESULT

The analysis of the payment result is described in the *Hosted Payment Page Implementation Guide* available in our online documentation archive (<https://docs.lyra.com/fr/>).

This document only describes the steps for processing data relative to the response of a payment made with Bancontact.

11.1. Processing the response data

Here is an example of analysis to guide you through processing the response data.

1. Identify the order by retrieving the value of the **vads_order_id** field if you have transmitted it in the payment form.

Make sure that the order status has not been updated yet.

2. Retrieve the payment result transmitted in the **vads_trans_status** field.

Its value allows you to define the order status.

VALUE	DESCRIPTION
CAPTURED	Captured The transaction is accepted. It is visible in the Captured transactions tab. Debit is immediate (no capture file is sent to the acquirer).
REFUSED	Declined Transaction is declined. See the following chapter to obtain more information on the rejected payment.
WAITING_AUTHORISATION	Waiting for authorization. Waiting for the response from the acquirer.

3. Retrieve the payment reference transmitted in the **vads_trans_id** field.
4. Retrieve the field **vads_trans_uuid** containing the transaction generated unique reference by the payment server.
5. Retrieve the value of the **vads_trans_date** field to identify the payment date.
6. Retrieve the used amount and currency. To do this, retrieve the values of the following fields:

Field name	Description
vads_amount	Payment amount in the smallest currency unit.
vads_currency	Numeric code of the currency used for the payment.
vads_change_rate	Exchange rate used for calculating the effective payment amount (see vads_effective_amount).
vads_effective_amount	Payment amount in the currency used for the capture in the bank.
vads_effective_currency	Numeric code of the currency that will be used for the capture at the bank.

Table 1: Analysis of the payment amount and currency

7. Retrieve the payment method data used for the payment by analyzing the following fields:

Field name	Description
vads_card_brand	Used payment method. Populated with: BANCONTACT
vads_acquirer_network	Acquirer network code. Populated with: LYRA_COLLECT_PPRO

8. Retrieve all the order, buyer and shipping details.

These details will be provided in the response only if they have been transmitted in the payment form.

Their values are identical to the ones submitted in the form.

9. Proceed to order update.

11.2. Analyzing the result of the authorization request

The result of the authorization is specified in the **vads_auth_result** field.

This field is set to:

- **0** when the payment is successful,
- one of the values below when the payment is rejected:

Codes	Description	Comment
1010	Unknown error	
1011	Incorrect information	A non-exhaustive list of possible cases: <ul style="list-style-type: none">• Invalid cardholder number• Invalid CVV• Invalid expiration date• Invalid buyer country• Invalid transaction currency
1012	Payment abandoned by the user	
1013	Expired	A non-exhaustive list of possible cases: <ul style="list-style-type: none">• Expired session
1014	Technical error on the acquirer side	Contact the tech support.
1016	Canceled by the acquirer	A non-exhaustive list of possible cases: <ul style="list-style-type: none">• Risk management module• failed buyer authentication

12. MAKING A REFUND VIA THE MERCHANT BACK OFFICE


To initiate a refund request from your Merchant Back Office:

1. Display the **Transactions** tab.

2. Select the transaction.

Click on the **Filters** icon () to search for the relevant transaction if it is not on the transactions list.

3. Display the **contextual menu**.

Click on the  icon.

4. Click the **Refund** button. The dialog box **Request a refund for this transaction** appears.

5. Enter the amount to be refunded. The amount to refund cannot be greater than the transaction initial amount.

6. Click on **OK** to save your request.

Once the request done, Lyra Collect checks if the payment account balance is sufficient to support the refund amount.

Once the request processed, the refund amount is deducted from the next fund transfer.

13. OBTAINING HELP

Looking for help? Check our FAQ on our website

<https://docs.lyra.com/en/collect/faq/sitemap.html>

For any technical inquiries or if you need any help, contact *technical support*.

To help us process your demands, you will be asked to communicate your customer code (e.g.: **CLXXXXX**, **MKXXXXX** or **AGXXXXX**).

This information is available in the Merchant Back Office (top of menu).