Lyra

COLLECTING SOLUTION

Adding the UnionPay payment button

Implementation Guide

Document version 1.4

Contents

1. HISTORY OF THE DOCUMENT

Version	Author	Date	Comment
1.4	Lyra Collect	6/7/2022	• Update of the status descriptionWAITING_AUTHORISATIONin the *Processing the response data* chapter.
1.3	Lyra Collect	11/2/2020	• Update of error codes in the *Processing errors* chapter. • Update of the *Technical information* chapter. • Update of the refund process.
1.2	Lyra Collect	1/24/2020	• Update of the CAPTURED status description. • Update of additional information. • Integration by iframe not supported.
1.1	Lyra Collect	9/30/2019	• Supported currencies updated. • Update of available operations.
1.0	Lyra Collect	9/20/2019	Initial version

2. PRESENTATION

China UnionPay (or CUP) is the world's largest card network.
They are accepted in more than 140 countries including France.

Supported currencies	• EUR • USD • GBP
Supported countries	• China
Additional information	• Debit is immediate (no capture delay). • Transaction validation is automatic (no manual validation). • No capture file is sent to the acquirer.

3. INFORMATIONS TECHNIQUES

Valeurs du champ vads_card_brand	Devises supportées	Pays supportés	Durée de validité de l'autorisation	Cinématique de paiement
UNION_PAY	EUR; USD	CN	0	Capture immédiate

Canaux de vente	
e-commerce	✔
m-commerce	✖
Paiement manuel	✖
Serveur Vocal Interactif	✖
Ordre de paiement par e-mail/SMS	✔
Ordre de paiement par WhatsApp	✔

Opération sur les transactions	
Annulation	✖
Remboursement	✔
Modification	✖
Validation	✖
Duplication	✖
Rapprochement manuel	✔

Type d'intégration	
Redirection	✔
Iframe	✖
Client JavaScript	✖
Formulaire de collecte de données	✔
MarketPlace	✖
API Web Services	✖
SDK Mobile	✖
Back Office	✖
WhatsApp	✖

Typologie de paiement	
Paiement immédiat	✔
Paiement différé	✖
Paiement en plusieurs fois	✖
Paiement par abonnement	✖
Paiement par fichier (alias ou par lot)	✖
Paiement 1 clic	✖
Paiement par wallet	✖

Divers	
Restitution dans les journaux	✔
Rapprochement des transactions	✔
Rapprochement des impayés	✔
Tentatives de paiement supplémentaires	✖

4. PREREQUISITES

In order to enable the UnionPay payment method:

1. Contact the sales administration .

2. Fill out and send the **KYC** and **Merchant Registration Form**.

3. Once all the documents have been validated, the UnionPay payment method will be enabled for your shop.

5. PAYMENT PROCESS

You will find below the payment flow of a payment via UnionPay:
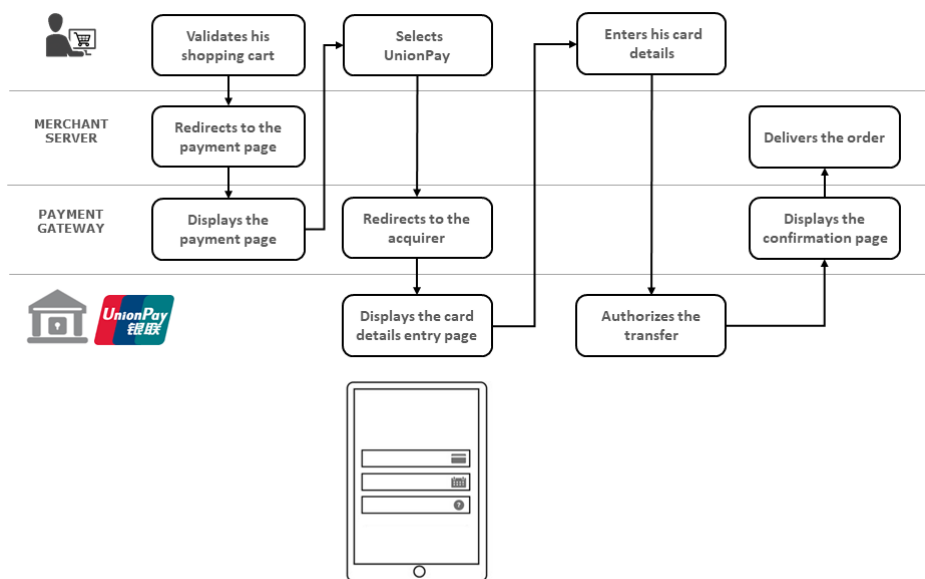
Note:

If the mandatory fields have not been provided (see chapter **Creating an UnionPay payment request**), another page is provided to the buyer to allow him or her to fill in their personal details.

6. TRANSACTION SETTLEMENT

UnionPay 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 sales administration .

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

The Expert Back Office provides several types of notifications.

- 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	E-mail sent to the merchant	E-mail sent to the buyer
Enabled		**Reference**
✖		Instant Payment Notification URL on batch authorization
✔		Instant Payment Notification URL at the end of the payment
✖		Instant Payment Notification URL on batch change
✖		Instant Payment Notification URL on cancellation
✖		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 process 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 JavaScript client.

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. They 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	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: • a chain of characters (in this case it must be framed by double-quotes) • a number • an object • a table • a boolean • empty Example: {"name1":45,"name2":"value2", "name3":false}
bool	Boolean. Can be populated with the **true** or **false** value.
enum	Defines a field with a complete list of values. The list of possible values is given in the field definition.
Enum list	List of values separated by a " ; ". The list of possible values is given in the field definition. Example: vads_available_languages=fr;en
map	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: • a chain of characters • a boolean • a json object • an xml object 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

9.1. Creating an UnionPay 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	• **UNION_PAY** to directly call the UnionPay payment button. • **VISA;UNION_PAY** to offer the choice between VISA and UnionPay.
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: • **978** (EUR) • **826** (GBP) • **840** (USD)
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_country	Country code in compliance with the ISO 3166 alpha-2 standard	a2	Possible value:**CN**
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="CN" />
<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="UNION_PAY" />
<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 UNION_PAY payment method:

Code	Message	Description of the error
10104	UNAVAILABLE_PAYMENT_METHOD	The UNION_PAY 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 UnionPay.

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. The debit is immediate (no capture file is sent to the acquirer).
REFUSED	**Refused** Transaction is refused. See the following chapter to obtain more information on the payment refusal.
WAITING_AUTHORISATION	**Waiting for authorization** This status is used when the payment status is not known when the buyer is redirected to the payment gateway. This status is temporary. The payment gateway contacts the acquirer several times a day to synchronize the payment status. In rare cases, it may take several days to obtain the final status. After 7 days without a payment confirmation from the acquirer, the gateway automatically rejects the payment. ⓘ If the merchant has activated the **E-mail of payment confirmation sent to the buyer** notification rule, the latter will receive an e-mail confirming the registration of their payment request. This e-mail is not a proof of payment and should not be confused with the payment confirmation e-mail.

3. Retrieve the field **vads_trans_uuid** containing the unique transaction reference generated by the payment server.

4. Retrieve the value of the **vads_trans_date** field to identify the payment date.

5. 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.

Field name	Description
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

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

Field name	Description
vads_card_brand	Used payment method set to: **UNION_PAY**
vads_acquirer_network	Acquirer network code set to: **LYRA_COLLECT_PPRO**

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

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

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

8. 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 <u>successful</u>,

- one of the values below when the payment is <u>rejected</u>:

Codes	Description	Comment
1010	Unknown error	
1011	Incorrect information	A non-exhaustive list of possible cases: • 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: • 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: • 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).