Callback and Payment Notification Management

In this section, you will find everything you need to manage the various entry points that your application will receive during and after an Axepta BNP Paribas Online payment.

You will learn:

- Which URLs to transmit when creating a payment,
- The order in which they are called,
- How to interpret the returned information,
- How to verify the actual status of a transaction,
- How to manage the webhook.

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1. Provide URLs : return, cancel, webhook

When initializing the payment, you must provide a URLs object:

Example of a return URL

```
        urls{
                "return":"https://myProcessingServer.net/myApi/success.php?transId=95330876-67ae-4949-a11c-
b9a29257831b",
                "cancel":"https://myProcessingServer.net/myApi/cancel.php?transId=95330876-67ae-4949-a11c-
b9a29257831b",
                 "webhook":"https://myBackOfficeServer.net/webhook.php"
        }
```

- Return = redirection when the customer clicks the confirmation button at the end of the payment process.
- Cancel = redirection if the customer cancels the payment.
- Webhook = asynchronous and guaranteed notification, independent of the customer's action.

2. Return URL & Cancel URL

One of these two URLs (return or cancel) will be called at the end of the transaction processing in order to:

- **Redirect the customer back to the merchant website** at the end of the transaction
- **Inform the merchant of the transaction status**: (successful or not)
- **Return to the merchant's back-office the unique transaction identifier payId** generated by Axepta Online

When one of these URLs is called, Axepta BNP Paribas Online automatically appends the following parameter : PayId=<paymentId generated by Axepta> - see Integration recommendation

You should include your own identifier in the URLs to link the return call to your internal order.

Example of a URL triggered after customer payment validation:

- In green, the URL provided during payment initialization, including a transId to link the return to a merchant ID.
- In red, the PayId parameter added by the server.

https://myProcessingServer.net/myApi/success.php?transId=95330876-67ae-4949-a11c-b9a29257831b&PayId=b6eae9b16e3343fa90da39d4ee7bf4ad

What to Do When You Receiving This Call?

When one of these URLs is triggered:

1. Retrieve the PayId parameter.
2. Call the API to get the actual transaction status: GET /payments/getByPayId/{payId} - Retrieve payment details by Payment ID
3. Update your order based on the status and responseCode.

Key fields in the API Response

- Amount: value, capturedValue, refundedValue
- Identifiers: payId, transId, xId, refNr
- Status: status = AUTHORIZED, CAPTURE_REQUEST, OK, FAILED, etc.
- Result:
  - responseCode = "00000000" OR "0" indicates success
  - responseDescription = textual message

A successful transaction may return either "00000000" or "0" depending on the payment stage or method.

You must check both values to determine success, "00000000" OR "0"

Examples of summarized responses

getByPayId response for a card transaction in AUTHORIZED status


```
 {
        "amount":{
                "value":126,
                "currency":"EUR",
                "capturedValue":0,
                "refundedValue":0
        },
        "payId":"91a6299a704147bf934aabd79fd1dc5d",
        "merchantId":"MY_MERCHANT_ID",
        "transId":"Trans361039",
        "xId":"b55e68b7e4644a90836ae31effe1fc60",
        "refNr":"refNb77254",
        "status":"AUTHORIZED",
        "responseCode":"00000000",
        "responseDescription":"Transaction successful",
        "paymentMethods":{
                "type":"CARD"
        }
}
```


getByPayId response for a card transaction in a CAPTURE_REQUEST status


```
 {
        "amount":{
                "value":1200,
                "currency":"EUR",
                "capturedValue":0,
                "refundedValue":0
        },
        "payId":"09526745fa704e9c8584dbe893c31f99",
        "merchantId":"MY_MERCHANT_ID",
        "transId":"1230861007",
        "xId":"2781d7d379e5449e9717c901ba6f9ff7",
        "refNr":"Q1ovVxioaZ6n",
        "status":"CAPTURE_REQUEST",
        "responseCode":"0",
        "responseDescription":"REQUEST",
        "paymentMethods":{
                "type":"CARD"
        }
}
```


3. Webhook

At the end of transaction processing, Axepta BNP Paribas Online notifies the merchant website of the final transaction result.

The webhook notification is the only reliable way to be informed of transaction completion.

It is mandatory for the merchant system to process webhook calls.

It is sent via an HTTP REST call to the webhook URL provided during payment initialization.

It is sent even if the customer:

- Closes their browser,
- Loses connection,
- Does not return to your website.

When is it sent?

After each asynchronous payment processing completion

If the endpoint is unavailable, the notification is retried up to 8 times

Attempt	Delay	Time after 1st notification
0	Instantaneous	0
1	00:01 h	00:01 h
2	00:08 h	00:09 h
3	00:27 h	00:36 h
4	01:04 h	01:40 h
5	02:05 h	03:45 h
6	03:36 h	07:21 h
7	05:43 h	13:04 h
8	08:32 h	21:36 h

What you must do

1. Read the JSON payload
2. Identify the transaction using payId or transId
3. Update your system accordingly
4. Respond with HTTP 200 OK

Important: Never finalize an order based solely on the Return URL.

Always rely on the webhook as the source of truth.

Webhook Structure

Provided Fields

- merchantId
- payId
- transId
- xId
- refNr
- status (AUTHORIZED, FAILED, etc.)
- responseCode / responseDescription
- amount
- paymentMethods
- creationDate (UTC)
- channel (ECOM, MOTO, Pay By Link…)

Example

webhook payload


```
{
    "merchantId": "YOUR_MERCHANT_ID",
    "payId": "91a6299a704147bf934aabd79fd1dc5d",
    "transId": "Trans361039",
    "xid": "b55e68b7e4644a90836ae31effe1fc60",
    "refNr": "refNb77254",
    "status": "AUTHORIZED",
    "responseCode": "00000000",
    "responseDescription": "Transaction successful",
    "amount": {
        "value": 126,
        "currency": "EUR"
    },
    "paymentMethods": {
        "type": "CARD"
    },
    "creationDate": "2025-10-30T11:27:57Z",
    "channel": "ECOM"
}
```


Security and Verification

To ensure the authenticity of webhook data, payloads are signed using HMAC-SHA256.

The signature is included in three HTTP headers within the webhook message.

Signature headers

X-Paygate-Signature-Version	Version of the signature format (currently, fixed value: `v1`)
X-Paygate-Timestamp	Unix epoch timestamp (seconds since 1970-01-01T00:00:00Z, UTC)
X-Paygate-Signature	Signature in the format `v1=<hex-hmac>` Multiple signatures can be supported to manage key renewal (e.g. `v1=<hmac1> OR v2=<hmac2>`)

Multiple Keys

It is possible to configure up to two sets of keys for API Authentication and Signature generation.

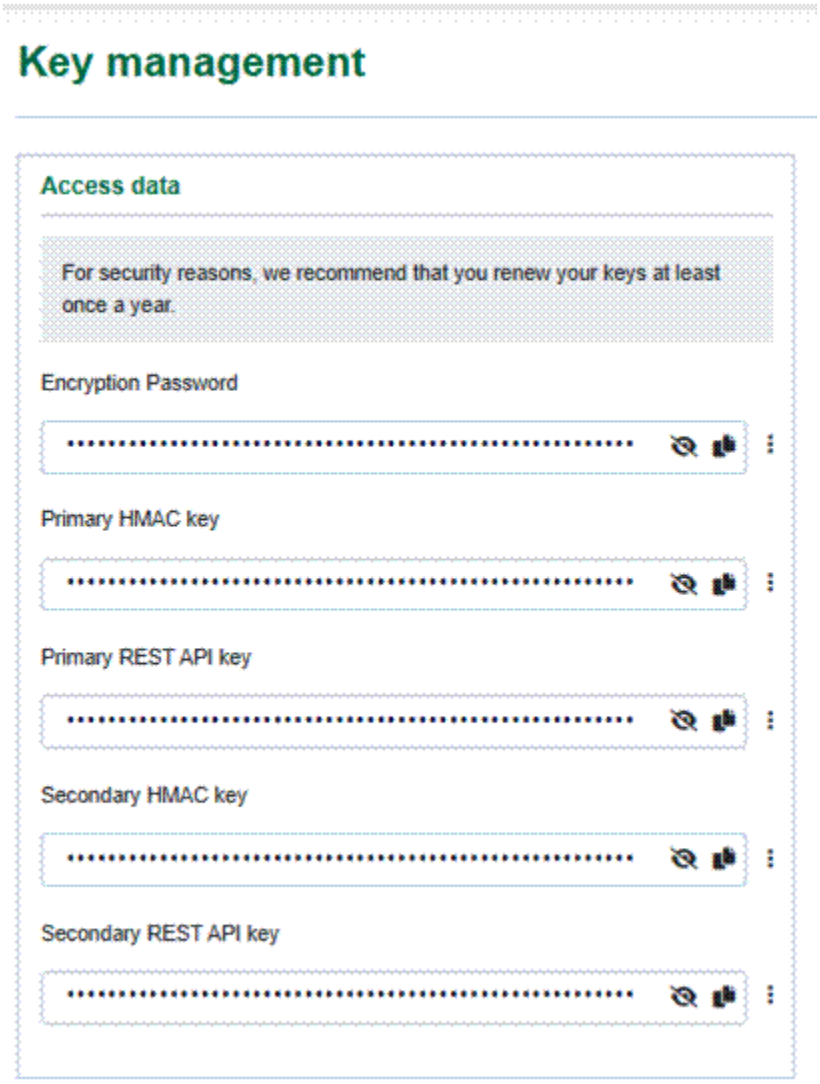
The keys are defined in the merchant portal and are labeled:
- Primary (v1)
- Secondary (v2)

The key version used by the Axepta Platform for webhook signatures (v1 or v2) depends on the key used by the merchant during the authentication process.
For example, if the merchant authenticates using the Secondary (v2) REST API Key, the Secondary (v2) REST HMAC Key will be used for signature generation, and the X-Paygate-Signature header will start with: "v2=...".

The Key version used by Axepta Platform for webhook signature (v1 or v2) is choosed accordingly to key used by the Merchant during the authentication process (v1 or v2)

Key rotation

Two sets of keys can be configured, but only one set is active at a time (the one selected during the authentication process).
This allows you to update the inactive set, configure and distribute keys across all equipment, and then switch to the new version when ready.



Signature Generation (Axepta BNP-Paribas Online)

```
signed_payload = timestamp + "." + raw_json_body
signature = HMAC_SHA256(secret, signed_payload)
```

- `secret` – HMAC key
- The generated `Signature` is encoded 'hex' and the header is set as follows:

```
X-Paygate-Signature: v1=<hex-hmac>
```

Signature Verification (Merchant)

To verify the authenticity of the webhook message data:

1. Extract the data carried by the HTTP headers:
    - `X-Paygate-Timestamp`
    - `X-Paygate-Signature`
2. Retrieve the raw JSON payload (exact binary body)
3. Compute the HMAC using the extracted data

4. `signed_payload = timestamp + "." + raw_body`
   expected_signature = HMAC_SHA256(secret, signed_payload)
5. Compare the calculated signature with the received signature using a "constant-time" method.
6. Validate the webhook if:
   a. The signatures are identical
   b. The Timestamp is within ±5 minutes of your local clock.

Webhook authenticity verification example:

Merchant Id used : BNP_DEMO_MID
Merchant Id HMAC Key : see Sandbox & Test page

Transaction done the 19th of May, 2026, at 09h23m20sec Paris time (GMT+2)

Webhook received


```
Headers
{
        "Accept-Encoding": "gzip",
        "Content-Length": 381,
        "Content-Type": "application/json",
        "Expect": "100-continue",
        "X-Forwarded-Host": "bin.webhookrelay.com",
        "X-Forwarded-Proto": "https",
        "X-Paygate-Signature": "v1=DF1F4AA6022460A9821832F9B89DF82D92D01B35C80DDDF596E97FF26E0ABB14",
        "X-Paygate-Signature-Version": "v1",
        "X-Paygate-Timestamp": "1779175402",
        "X-Real-Ip": "213.155.65.68"
}

Body
{
        "merchantId": "BNP_DEMO_MID",
        "payId": "413cef3ff4fd4b08af2245d5a889dbaa",
        "transId": "Trans293156",
        "xid": "7919a1e81571466ca8f5737d5414f7a4",
        "refNr": "refNb81210",
        "status": "FAILED",
        "responseCode": "22940040",
        "responseDescription": "NO RESPONSE",
        "amount": {
                "value": 460,
                "currency": "EUR"},
        "paymentMethods": {
                "type": "CARD"},
        "creationDate": "2026-05-19T07:23:20Z",
        "channel": "ECOM"
}
```


Webhook Validation:

Check	Parameter used	Value	Result
Is the signature version equal to v1	X-Paygate-Signature-Version	v1	CORRECT
Is the Timestamp is within ±5 minutes of your local clock ?	X-Paygate-Timestamp	1779175402	CORRECT Unix epoch time: 1779175402 Converted to GMT = 07h23m22sec It's between 5 min of transaction

			date&time (2 sec exactly)
Are the signatures identical ?	X-Paygate-Signature	DF1F4AA6022460A9821832F9B89DF82D92D01B35C80DDDF596E97FF26E0ABB14	CORRECT (see below)

Signature verification:

Data used for signature: <epoch timestamp value>.<full webhook json body>
Value:

> 1779175402.{"merchantId": "BNP_DEMO_MID","payId": "413cef3ff4fd4b08af2245d5a889dbaa","transId": "Trans293156","xid": "7919a1e81571466ca8f5737d5414f7a4","refNr": "refNb81210","status": "FAILED","responseCode": "22940040","responseDescription": "NO RESPONSE","amount": {"value": 460,"currency": "EUR"},"paymentMethods": {"type": "CARD"},"creationDate": "2026-05-19T07:23:20Z","channel": "ECOM"}

Computed HMAC-SHA256 with previous value as input, using 6Gp_A!8f)3zZ9K]gb7S?2*tN(yH54[wB key:

> df1f4aa6022460a9821832f9b89df82d92d01b35c80dddf596e97ff26e0abb14

Nota: signature verification should be done without case sensitivity

Integration Best Pratices

- Always verify the transaction via the `getByPayId` endpoint, even if the front-end return indicates success,
- Always process the webhook notifications.
- Always verify webhook data authenticity by validating the signature.
- Log all return/cancel/webhook calls.