



# **E-Payment Gateway**

Technical Specification v1.1



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## Revisions

Date	Revision	Author	Description
16/9/2018	1.0	Abdullah Adel	Document Preparation
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## 1. Introduction

Internet acquiring is used to sell goods and services via the public Internet, allowing customers to use their regular bank cards to make purchases. A merchant planning to sell goods or services via the Internet must ensure the security of the payments being processed by taking the following measures

- Key data (such as personal data and bank cards details) must be transferred via a secure (SSL or TLS) connection.
- Information on the current payment (amount, currency, or description of the order) and the result of the payment must be protected from and not be accessed by intruders.
- Before the payment is made, the customer's card parameters (for example, the expiry date, cardholder name and so on) should be checked.

The 3-D Secure protocol is used to provide an additional security layer. The major payments networks have introduced their own services based on the 3-D Secure protocol, for example, MasterCard has "Mastercard SecureCode" and Visa has "Verified by Visa."

The APS E-commerce Payment Gateway is used as a technology platform. It enables a merchant to perform the necessary safety procedures without the need to significantly restructure their Internet store site and existing business processes.

## 2. Merchant Requirements

The merchant should have developed a website that can interact with APS E-commerce Payment Gateway. There is no specific programming language required, the website can be developed using any language that can send/receive HTTP requests. The merchant website should be integrated with a database to store all orders made by the customers as an order ID will be required by the EPG to process the order.

The flow starts with the merchant making an order registration request, after the request is approved by EPG, the customer will be redirected to APS payment page. The customer will input its information, submits the payment and get redirected based on the operation result.

### 3. REST Interface

Interactions between the merchant and the APS E-commerce Payment Gateway are implemented as HTTP requests with GET or POST methods to specific URLs. These are separate for each individual request type.

The parameters used in the interactions are sent as parameters of GET or POST requests; their values must be URL-encoded.

The result of processing a request returns as a JSON object, for example:

```
{"errorCode":"12","errorMessage":"Empty amount"}
```

For authorization purposes, each request must include the login and password of the merchant that were generated during its registration. The values are sent as the following parameters:

Name	Type	Mandatory	Description
userName	AN..30	Yes	Login of the merchant generated during registration.
password	AN..30	Yes	Password of the merchant generated during registration.

All text fields must use UTF-8 encoding. In REST requests special characters must be encoded using URL encoding. The table of characters can be viewed at the following URL:

[https://www.w3schools.com/tags/ref\\_urlencode.asp](https://www.w3schools.com/tags/ref_urlencode.asp). For example, a password qwe?rt%y is transferred as qwe%0Frt%25y.

Note: The error code does not display the order status. To view the status of an order, use the **getOrderStatus**.

#### 3.1 Order Registration Request

To register an order use **register.do**, these requests are designed to register orders in the APS E-commerce Payment Gateway and have the same set of parameters.

##### Request Parameters:

Name	Type	Mandatory	Description
userName	AN..30	Yes	Merchant login received during registration.
password	AN..30	Yes	Merchant password received during registration.
orderNumber	AN..32	Yes	Identifier of the order in the merchant system.

amount	N..20	Yes	Order amount in the minor denomination (for example, cents).
currency	N3	Yes	Payment currency code in the ISO 4217 format.
returnUrl	AN..512	Yes	URL to which the customer is redirected after a successful payment.
failUrl	AN..512	No	Web address to which the customer is redirected if the payment fails.
description	AN..512	No	Free form description of the order.
language	A2	No	Language code in the ISO 639-1 format. If unspecified, APS E-commerce Payment Gateway uses the default language from the merchant settings. Error messages are returned in this language.
clientId	AN..255	No	Customer identifier in the merchant system. It is used in binding.
jsonParams[]	AN..1024	No	<p>Fields used to store additional information.</p> <p>The type is as follows:</p> <pre>{"param": "value", "param2": "value2"}</pre> <p>See Json parameter list for information on which parameters are passed. These fields may be transferred to the bank processing center for their representation in registers.* This functionality can be enabled during the integration period based on the agreement with the bank. If notifying customers is enabled for the merchant, this block must contain the email parameter with the customer's email address. * The orderNumber field and its description are sent to the bank processing system by default (the maximum length is 99, and the following symbols cannot be used: %, +, \r, \n).</p>
sessionTimeoutSecs	N...9	No	Lifespan of the order in seconds. If the parameter is not specified, then the value from the merchant settings is used, otherwise the default value (1200 seconds) is used.

			If the request contains the expirationDate parameter, the sessionTimeoutSecs parameter is ignored.
expirationDate	ANS	No	Date and time when the order is terminated. The following format is used: yyyy-MMddTHH:mm:ss If this parameter is not specified, the sessionTimeoutSecs parameter is used to determine the date and time when the order is terminated.
bindingId	AN..255	No	Identifier of the binding that was created earlier. It may be used only if the merchant has the permission to work with bindings.  If this parameter is sent in the registerOrder request, the following actions apply: 1. This order can be paid only by binding. 2. The payer is redirected to a payment page where the CVC must be entered.
recurrenceType	String	Yes for recurring payments	Way in which subsequent recurring payments are processed: · MANUAL — for manual processing of recurrent payments scheduled on the merchant side. · AUTO — for automatic handling of payments scheduled on the EPG side. This parameter is mandatory to register a recurring payment.
recurrenceFrequency	String	For MANUAL: ● No For AUTO: ● Yes	Parameter is used only for automatic recurrent payments. It is not required for manual payments. See Appendix B: Specifying recurrenceFrequency for information on how to configure this parameter.
recurrenceStartDate	N8	No	Date when the recurrent payment is first sent. It is used on the 3-D Secure page and is sent in PaReq to the issuer ACS as it is mandatory. By default the current date of the initial

			payment is used. The value format is <yyyymmdd>.
recurrenceEndDate	N8	No	Date when the recurrent payment ends. It is used on the 3-D Secure page and is sent in PaReq to the issuer ACS as it is mandatory. The EPAY.RESP_CODE.EXP_DATE parameter indicates that a recurrence period of a payment is finished. The default EPAY.RESP_CODE.EXP_DATE value is 33. The value format is <yyyymmdd>.

### Response Parameters:

Name	Type	Mandatory	Description
orderId	ANS36	No	Unique order number in the APS E-commerce Payment Gateway. It is absent if the order registration has failed (the error is described in the ErrorCode field).
formUrl	AN..512	No	URL of the payment page to which the customer should be redirected. If the order registration has failed, this parameter is absent (the error is described in the ErrorCode field).
errorCode	N3	No	Response code: 0 in the case of a successful transaction, other code if an error occurred when processing the request.
errorMessage	AN..512	No	Description of the error in the language that was sent in the language parameter of the request.
recurrenceId	N6	Yes for recurring payments	Identifier that is used for a series of all subsequent payments that recur until the recurrence period ends.

### Error codes (values of the errorCode field)

Value	Description
0	No system error.
1	Order with given order number has already been processed or the childId is incorrect.
	Order with this number was registered, but was not paid.
	Sub-merchant is blocked or deleted.

3	Unknown currency.
4	Order number is not specified.
	Merchant user name is not specified.
	Amount is not specified.
	Return URL cannot be empty.
	Password cannot be empty.
5	Incorrect value of a request parameter.
	Incorrect value in the Language parameter.
	Access is denied.
	Merchant must change the password.
	Invalid jsonParams[].
7	System error.

### Request example for UAT (test environment)

<https://uat-proxy.aps.iq/payment/rest/register.do?userName=apiuser&password=apiuserpassword&orderNumber=261227090900&amount=888&currency=978&returnUrl=http://www.return.url.com>

### Request example for Production (LIVE environment)

<https://ecommerce.aps.iq/payment/rest/register.do?userName=apiuser&password=apiuserpassword&orderNumber=261227090900&amount=888&currency=978&returnUrl=http://www.return.url.com>

### Response example

```
{"orderId":"5f9adf5a-4796-4668-9285-07adf3c9a1aa","formUrl":" https://uat-proxy.aps.iq/merchants/Merchant/payment\_en.html?mdOrder=5f9adf5a-4796-4668-9285-07adf3c9a1aa"}
```

## 3.2 Order reversal request

The reverse.do request is used to cancel a payment for an order. This functionality is available within a limited period (specified by the bank) after a payment has been executed. The reversal transaction may be performed only once for a payment. If a reversal request results in an error, the next try will fail.

Reversals are available to a merchant only if the merchant has an agreement with its bank to perform reversals. To perform the reversal request, a user must have the relevant permissions.

### Request Parameters:

Name	Type	Mandatory	Description
userName	AN..30	Yes	Merchant login received during registration.
password	AN..30	Yes	Merchant password received during registration.



orderId	ANS36	Yes	Unique order number in the APS E-commerce Payment Gateway.
language	A2	No	Language code in the ISO 639-1 format. If unspecified, APS E-commerce Payment Gateway uses the default language from the merchant settings. Error messages are returned in this language.

### Response Parameters:

Name	Type	Mandatory	Description
errorCode	N3	No	Response code: · 0 in case of a successful transaction · Other code if an error occurred when processing the request.
errorMessage	AN..512	No	Information message about the transaction result: a success message or the description of an error.

### Error codes (errorCode) and messages (errorMessage)

Value	Description
0	No system error.
5	Access is denied.
	The user must change their password.
	Invalid amount.
	Deposit amount must be zero, or more than 1 currency unit (for example, 1 euro).
6	Unregistered OrderId.
7	System error.
	Incorrect internal values, check the hold and deposited amounts.
	Payment must be in a correct state.

### Request example for UAT (test environment)

<https://uat-proxy.aps.iq/payment/rest/reverse.do?userName=apiuser&password=apiuserpassword&orderId=aca0f48d-9e99-4437-9335-a50a42c363da>

### Request example for Production (LIVE environment)

<https://ecommerce.aps.iq/payment/rest/reverse.do?userName=apiuser&password=apiuserpassword&orderId=aca0f48d-9e99-4437-9335-a50a42c363da>

### Response example

```
{"errorCode":"0","errorMessage":"Success"}
```

## 3.3 Refund request

A refund.do request is used to refund deposited money. This request returns the funds paid for the order back to the customer. The request results in an error if the customer was not charged. Under NDA only the request allows multiple refunds, but their total amount cannot exceed the amount that was deposited from the customer's account as a result of the order. A merchant's user must have a corresponding permission in the system to perform a refund request.

### Request Parameters:

Name	Type	Mandatory	Description
userName	AN..30	Yes	Merchant login received during registration.
password	AN..30	Yes	Merchant password received during registration.
orderId	ANS36	Yes	Unique order number in the APS E-commerce Payment Gateway.
amount	N..20	Yes	Order amount in the minor denomination (for example, cents).

### Response Parameters:

Name	Type	Mandatory	Description
errorCode	N3	No	Response code: <ul style="list-style-type: none"><li>· 0 in case of a successful transaction</li><li>· Other code if an error occurred when processing the request.</li></ul>
errorMessage	AN..512	No	Information message about the transaction result: a success message or the description of an error.

### Error codes (errorCode) and messages (errorMessage)

Value	Description
0	No system error.
5	Access is denied.
	The user must change their password.
	Invalid amount.
	Deposit amount must be zero, or more than 1 currency unit (for example, 1 euro).
6	Unregistered OrderId.
7	System error.
	Payment must be in a correct state.

### Request example for UAT (test environment)

<https://uat-proxy.aps.iq/payment/rest/refund.do?userName=apiuser&password=apiuserpassword&amount=333&orderId=a2565183-fa21-4b8b-84dc-15b34933424d>

### Request example for Production (LIVE environment)

<https://ecommerce.aps.iq/payment/rest/refund.do?userName=apiuser&password=apiuserpassword&amount=333&orderId=a2565183-fa21-4b8b-84dc-15b34933424d>

### Response example

```
{"errorCode":"0","errorMessage":"Success"}
```

## 3.4 Order status request

To obtain the current state of a registered order, send data with getOrderStatus.do method (GET or POST) to the corresponding URL. The order status is determined by the value of the OrderStatus parameter. Note: The authCode field is deprecated.

### Request Parameters:

Name	Type	Mandatory	Description
userName	AN..30	Yes	Merchant login received during registration.
password	AN..30	Yes	Merchant password received during registration.
orderId	ANS36	Yes	Unique order number in the APS E-commerce Payment Gateway.
language	A2	No	Language code in the ISO 639-1 format. If unspecified, APS E-commerce Payment Gateway uses the default language from the merchant settings. Error messages are returned in this language.

### Response Parameters:

Name	Type	Mandatory	Description
OrderStatus	N3	No	Displays the order status in APS Ecommerce Payment Gateway. Possible values are listed in the table below. This parameter is absent if no order with the specified ID is found.
ErrorCode	N3	No	Error code.
ErrorMessage	AN..512	No	Description of the error in the language that was sent in the language parameter of the request.

OrderNumber	AN..32	Yes	Identifier of the order in the merchant system.
Pan	N..19	No	Masked number of the card that was used in payment. It is specified only for paid orders.
expiration	N6	No	Card expiration date in the YYYYMM format. It is specified only for paid orders.
cardholderName	A..64	No	Cardholder name. It is specified only for paid orders.
Amount	N..20	Yes	Order amount in the minor denomination (for example, cents).
currency	N3	No	Payment currency code in the ISO 4217 format.
approvalCode	AN6	No	Payments network authorization code. The field has fixed length of six characters; it can contain both numbers and letters.
authCode	N3	No	This parameter is deprecated. Its value is always 2 regardless of the order status and the processing system authorization code.
Ip	AN..20	No	IP address of the customer who paid for the order.
clientId	AN..255	No	Identifier of the customer in the merchant's system. It is used to implement the binding functional. It may be present, if the merchant has the permission to create bindings.
bindingId	AN..255	No	Identifier of the binding created when paying this order or created earlier and used to pay for this order. It is present only if the merchant has the permission to create bindings.

The OrderStatus field may have the following values:

State Number	Description
0	Order registered, but not paid.
1	Preauthorization amount was put on hold (for a two-phase payment).
2	Amount was deposited successfully.
3	Authorization has been reversed.

4	Transaction has been refunded.
5	Authorization has been initiated via the issuer's ACS.
6	Authorization is declined.

### Error codes (values of the ErrorCode field)

Value	Description
0	No system error.
2	The order is declined because of an error in the payment credentials.
5	Access is denied.
	The user must change the password. orderId is empty.
6	Unregistered OrderId.
7	System error.

### Request example for UAT (test environment)

<https://uat-proxy.aps.iq/payment/rest/getOrderStatus.do?orderId=a2565183-fa21-4b8b-84dc-15b34933424d&language=en&password=apiuserpassword&userName=apiuser>

### Request example for Production (LIVE environment)

<https://ecommerce.aps.iq/payment/rest/getOrderStatus.do?orderId=a2565183-fa21-4b8b-84dc-15b34933424d&language=en&password=apiuserpassword&userName=apiuser>

### Response example

```
{
  "expiration": "202006",
  "cardholderName": "Card Holder",
  "depositAmount": 100,
  "currency": "978",
  "approvalCode": "077807",
  "authCode": 2,
  "errorCode": "0",
  "errorMessage": "Success",
  "orderStatus": 2,
  "orderNumber": "26122017090903",
  "pan": "400001**0050",
  "amount": 888
}
```

## 3.5 Request for checking a card for 3-D Secure Enrolment

The `verifyEnrollment` request is used to check a card for enrollment to 3-D Secure.

### Request Parameters:

Name	Type	Mandatory	Description
userName	AN..30	Yes	Merchant login received during registration.
password	AN..30	Yes	Merchant password received during registration.
pan	N12...19	Yes	Card number.

## Response Parameters:

Name	Type	Mandatory	Description
errorCode	N3	No	Error code.
errorMessage	AN..512	No	Description of the error in the language that was sent in the language parameter of the request.
enrolled	A1	No	The flag signifying enrollment of the card to 3-D Secure. The available values are: Y, N, U.
emitterName	A1	No	Name of the issuing bank.
emitterCountryCode	AN..4	No	Country codes of the issuing bank.

## Error codes (values of the errorCode field)

Value	Description
0	The request has been processed without system errors.
1	The card number is not specified.
	The card number must be a number containing 13 to 19 digits.
5	Access is denied.
	The user must change their password.
6	No information is found for the specified card number.
7	System error.

## Request example GET

<https://web.rbsuat.com/ab/rest/verifyEnrollment.do?userName=userName&password=password&pan=4111111111111111>

## Response example

```
{"errorCode":"0","errorMessage":"Success","emitterName":"TEST  
CARD","emitterCountryCode":"RU","enrolled":"Y"}
```