



eBG.bg Payment Gateway

Merchant Interface API

How Messages Are Processed

Regardless of which programming language the merchant uses to integrate with the eBG.bg Payment Gateway, the Gateway uses XML to describe each message. The merchant's software generates the XML stream and sends it to the Gateway in XML format.

The extensibility of XML helps to ensure that future modifications to the gateway server have minimal impact on the merchant's implementation.

To process a message, the client application makes a HTTPS POST connection to the gateway server, sends a message in the form of an XML request and waits for the response. If the request fails signature validation a HTTP 403 or HTTP 500 status code is returned, else an XML response is returned.

The request is signed with the merchant's X.509 certificate, encapsulated in a PKCS#7 PEM encoded structure and set as value of the "request" parameter. If a detached signature is used the raw data is set as value of the "requestDetachedData" parameter.

For payment requests, if the PKCS#7 is co-signed by the client and merchant, the payment is automatically processed and no confirmation by the client is required on eBG site.

The XML request includes various XML entities to provide the server with inputs to the function to be performed. Some of these entities are required for any message, while others are optional and are specific for particular message types. See Request Fields section for further information on which entities and fields are required for each transaction type.

Message Types

The message type you use to capture funds on a customer's card is an `onlineShoppingPaymentRequest`.

You can return money to a customer against an existing order. To do so you have to log in eBG.bg site and use the merchant profile view.

Payments are processed asynchronously. To query information for a payment use a `paymentInformationRequest` or `paymentSearchRequest`.

The merchant can register a web url for payment-status-changed notifications in the profile menu of eBG.bg site. eBG.bg will issue a HTTP POST to the specified address with two parameters:



- data – a paymentInformationResponse xml element
- signature – a PKCS#7 signature

The signature can be verified against the merchantInterface.cer certificate (merchantInterface_test.cer for the eBG.bg test server).

You can request bank transfers to specific IBANs via bankTransferPaymentRequest message. In this case, the funds will be captured from the customer’s card with a single payment transaction and then transferred to the given IBANs.

Payment confirmation link

After a payment has been initiated and has an id assigned by eBG.bg, the merchant’s software can forward the user browser to the “accept payment” page. The urls on the test server are as follows:

- for full page size redirect– <http://demo.ebg.bg/page/payment/login.faces>
- for popup window – <http://demo.ebg.bg/page/popup/payment/login.faces>

When switching to production, please use www.ebg.bg for the server name.

The parameters are:

Parameter Name	Data Type	Description
paymentId	integer	The payment number as assigned by eBG.bg, when initiating the payment.
urlOk (optional)	string	Page to forward the user’s browser to after confirming the payment.
urlCancel (optional)	string	Page to forward the user’s browser to, if the user chooses to reject the payment.

The urlOk and urlCancel, if present, must start with ‘http://’ or ‘https://’ prefix. The urlOk can point to a page that checks the payment status (i.e. sends a paymentInformationRequest to eBG.bg) and displays a meaningful message to the client. The urlOk and urlCancel must not be specified as parameters of the confirmation link, if given in the redirectUrls element of the payment request.

Where to Go from Here

- I. Information on the entities and data fields to include for each transaction is included in the Request Fields section.
- II. Look for information on Gateway responses and error messages/codes in the Response Fields section.



Request Fields

Online Shopping Payment Request

This functionality is provided for merchants to submit payment request to given client.

Fields required:

- merchantId
- amount
- currencyCode
- date
- onGroundsOf

Root element is **onlineShoppingPaymentRequest**. See the table below for a list of available data fields.

Field Name	Data Type	Description
merchantId	integer	This field should contain the merchant identification number.
clientId	integer	Optional. This field should contain the client identification number. If not present, the client has to follow a url link and login to confirm the specified payment. Not before then the payment will be assigned to him/her.
amount	double	The total amount of this transaction, including subtotal, tax, and shipping.
currencyCode	3 character string	Valid currency code – currently fixed to BGN
date	dd.MM.yyyy / HH:mm	Payment request date and time.
onGroundsOf	string	Description of the payment.
deadline	dd.MM.yyyy or dd.MM.yyyy / HH:mm	Deadline of the payment. If the client has not confirmed the payment and the deadline has come, the payment status is changed to expired. If no deadline is set by the merchant, it is automatically set to 3 days.
autoCloseOnSystemReject	boolean	Whether to automatically close a payment when a transaction is rejected, or allow a next attempt, possibly with a different payment source.
httpNotifyUrl	string	Optional. Url for http payment status change notifications, if different than



		the one specified in the merchant's profile
redirectUrls	XML	Optional. Where to redirect the client's browser after payment is confirmed or rejected. A hint may be specified to be displayed above the "Continue" button.
notifyClient	boolean	Optional. Whether to explicitly notify (via e-mail and/or SMS) the client for the new payment. Value must be specified for clientId, if notifyClient is true.

The table below lists available fields in **redirectUrls** element.

Field Name	Data Type	Description
okUrl	string	Page to forward the user's browser to after confirming the payment.
okUrlHintBg	string	Optional. Hint (in bulgarian) to be displayed above the "Continue" button, if navigation will forward to the okUrl.
okUrlHintEn	string	Optional. Hint (in english) to be displayed above the "Continue" button, if navigation will forward to the okUrl.
cancelUrl	string	Page to forward the user's browser to, if the user chooses to reject the payment.
cancelUrlHintBg	string	Optional. Hint (in bulgarian) to be displayed above the "Continue" button, if navigation will forward to the cancelUrl.
cancelUrlHintEn	string	Optional. Hint (in english) to be displayed above the "Continue" button, if navigation will forward to the cancelUrl.

Example XML looks like this:

```
<onlineShoppingPaymentRequest>
  <merchantId>221</merchantId>
  <amount>143.52</amount>
  <currencyCode>BGN</currencyCode>
  <date>07.02.2006 / 11:44</date>
  <onGroundsOf>Goods: Cisco 1721 router</onGroundsOf>
```



</onlineShoppingPaymentRequest>

Payment Information Request

This is functionality provided for merchants to check the status of payment.

Fields required:

- merchantId
- paymentId

Root element is **paymentInformationRequest**. See the table below for a list of available data fields.

Field Name	Data Type	Description
merchantId	integer	This field should contain the merchant identification number.
paymentId	integer	This field should contain the payment identification number.

Example XML looks like this:

```
<paymentInformationRequest>
  <merchantId>33</merchantId>
  <paymentId>442</paymentId>
</paymentInformationRequest>
```

Payment Search Request

This is functionality provided for merchants to check the status of multiple payments.

Fields required:

- merchantId

All other fields are used for specifying search criteria.

Root element is **paymentSearchRequest**. See the table below for a list of available data fields.

Field Name	Data Type	Description
merchantId	integer	This field should contain the merchant identification number.
clientId	integer	This field should contain the client identification number.
paymentId	integer	This field should contain the payment identification number.



fromDate	dd.MM.yyyy	This field should contain the start date.
toDate	dd.MM.yyyy	This field should contain the end date.
currencyCode	3 character string	Valid currency code – currently fixed to BGN
paymentType	string	Valid payment type string. Available options are Online shopping, Service bill, Transfer.
status	string	This field should contain valid payment status string. Available options are: Unconfirmed Processing Expired Rejected by client Rejected by system, invalid data Rejected by system, insufficient funds Rejected by merchant Accepted Completed Rejected by system, internal error Processing cancellation Cancelled
onGroundsOf	string	Part of the text specified at payment creation.
orderBy	string	This field should contain valid payment order criteria. Valid options are: paymentId_asc paymentId_dsc date_asc date_dsc

Example XML looks like this:

```
<paymentSearchRequest>
  <merchantId>33</merchantId>
  <paymentId>442</paymentId>
</paymentSearchRequest>
```

Payment Update Request

This is functionality provided for merchants to modify a payment.

Fields required:

- merchantId
- paymentId
- action



Root element is **paymentUpdateRequest**. See the table below for a list of available data fields.

Field Name	Data Type	Description
merchantId	integer	This field should contain the merchant identification number.
paymentId	integer	This field should contain the payment identification number.
action	enum: reject, cancel	What to do with the payment: reject – if the payment has not been completed, but is not currently in a processing state, finalize it with a status "rejected by merchant"; cancel – if the payment has been completed, and the merchant wants to return the money back, possibly involving a reversal transaction.

Example XML looks like this:

```
<paymentUpdateRequest>
  <merchantId>33</merchantId>
  <paymentId>442</paymentId>
  <action>cancel</action>
</paymentUpdateRequest>
```

Bank Transfer Payment Request

This functionality is provided for merchants to request bank transfer(s) from a client.

Fields required:

- merchantId
- date
- onGroundsOf

Root element is **bankTransferPaymentRequest**. See the table below for a list of available fields.

Field Name	Data Type	Description
merchantId	integer	This field should contain the merchant identification number.
clientId	integer	Optional. This field should contain the client identification number. If not present, the client has to follow a url link and login to confirm the specified payment. Not before then the



		payment will be assigned to him/her.
date	dd.MM.yyyy / HH:mm	Payment request date and time.
onGroundsOf	string	Description of the payment.
deadline	dd.MM.yyyy or dd.MM.yyyy / HH:mm	Deadline of the payment. If the client has not confirmed the payment and the deadline has come, the payment status is changed to expired. If no deadline is set by the merchant, it is automatically set to 3 days.
autoCloseOnSystemReject	boolean	Whether to automatically close a payment when a transaction is rejected, or allow a next attempt, possibly with a different payment source.
httpNotifyUrl	string	Optional. Url for http payment status change notifications, if different than the one specified in the merchant's profile
redirectUrls	XML	Optional. Where to redirect the client's browser after payment is confirmed or rejected. A hint may be specified to be displayed above the "Continue" button.
notifyClient	boolean	Optional. Whether to explicitly notify (via e-mail and/or SMS) the client for the new payment. Value must be specified for clientId, if notifyClient is true.
bankTransfer	XML	Data needed to carry out the bank transfer(s). Several bank transfers can be associated with a single payment.

The redirectUrls element structure is described above in the definition of the **onlineShoppingPaymentRequest** element.

The table below lists available fields in **bankTransfer** element.

Fields required:

- recipientName
- iban
- amount
- currencyCode
- onGroundsOf

Field Name	Data Type	Description
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recipientName	string	Name of the person/entity owning the destination bank account.
iban	string	IBAN number of the destination bank account. Currency only bulgarian IBANs are allowed.
amount	double	The total amount to be transferred to the given bank account.
currencyCode	3 character string	Valid currency code – currently fixed to BGN
onGroundsOf	string	Text that will appear in the bank statement when the money is received.
budgetTransfer	XML	Optional. Used to specify additional info for transfer to a government institution.

The table below lists available fields in **budgetTransfer** element.

Fields required:

- documentType
- exactly one of bulstat, egn and Inch
- name

Field Name	Data Type	Description
paymentTypeCode	string	Required for bank accounts of income administrators and the Main budget.
documentType	string	Type and number of the document that requires the payment.
documentDate	dd.MM.yyyy	Issuing date of the document that is paid for.
periodStart	dd.MM.yyyy	Start date of a period that is paid for.
periodEnd	dd.MM.yyyy	End date of a period that is paid for.
bulstat	string	Identity number of the obliged legal entity.
egn	string	Identity number of the obliged private individual, for bulgarian citizens.
Inch	string	Identify number of the obliged private individual, for foreigners living in Bulgaria.
name	string	Name of the obliged individual / legal entity.

Example XML looks like this:

```
<bankTransferPaymentRequest>
  <merchantId>223</merchantId>
  <date>04.02.2006 / 15:17</date>
  <onGroundsOf>Банкови преводи</onGroundsOf>
```



```
<bankTransfer>
  <recipientName>ИБГ.БГ АД</recipientName>
  <iban>BG88SOMB91301040879001</iban>
  <amount>3.00</amount>
  <currencyCode>BGN</currencyCode>
  <onGroundsOf>Тест на услуга банков превод</onGroundsOf>
</bankTransfer>
<bankTransfer>
  <recipientName>Петър Петров</recipientName>
  <iban>BG40BUIB98888592829700</iban>
  <amount>27.00</amount>
  <currencyCode>BGN</currencyCode>
  <onGroundsOf>Тест на услуга банков превод</onGroundsOf>
</bankTransfer>
<bankTransfer>
  <recipientName>Община Велико Търново</recipientName>
  <iban>BG43SOMB91308424761244</iban>
  <amount>1.36</amount>
  <currencyCode>BGN</currencyCode>
  <onGroundsOf>Такса битови отпадъци</onGroundsOf>
  <budgetTransfer>
    <paymentTypeCode>442400</paymentTypeCode>
    <documentType>9</documentType>
    <periodStart>01.01.2007</periodStart>
    <periodEnd>02.05.2007</periodEnd>
    <egn>8803316819</egn>
    <name>Георги Маринов Друмев</name>
  </budgetTransfer>
</bankTransfer>
</bankTransferPaymentRequest>
```



Response Fields

The Gateway's engine will return a set of response codes for each message that has successfully communicated with the gateway through the SSL communications link.

Payment request Response

This information is returned as a result to an online shopping payment request or a bank transfer payment request.

Root element is **paymentResponse**. See the table below for a list of available data fields.

Field Name	Data Type	Description
status	string	This field specifies the payment request status. Valid values are accepted and rejected.
paymentId	integer	This field contains the payment identification in case of accepted payment request. This identification is intended for later check for transaction status.

Example XML looks like this:

```
<paymentResponse>
  <status>accepted</status>
  <paymentId>204</paymentId>
</paymentResponse>
```

Payment Information Response

This information is returned as a result to a merchant payment information request.

Root element is **paymentInformationResponse**. See the table below for a list of available data fields.

Field Name	Data Type	Description
clientId	string	This field should contain the client identification number. This field can be missing if the payment has no clientId associated so far. Once a payment has been accepted, it will have a clientId.
merchantId	string	This field should contain the merchant identification number.



paymentId	string	This field should contain the payment identification number.
amount	double	The amount associated with this payment.
currencyCode	string	The currency for this payment request.
date	string	This is the date that the merchant has submitted upon payment request.
onGroundsOf	string	The information provided by the merchant for client information.
deadline	dd.MM.yyyy or dd.MM.yyyy / HH:mm	Deadline of the payment. If the client has not confirmed the payment and the deadline has come, the payment status is changed to expired.
autoCloseOnSystemReject	boolean	Whether to automatically close a payment when a transaction is rejected, or allow a next attempt, possibly with a different payment source.
boricaPaymentTransaction	XML	Transaction authorization request and response data. This element is optional and present if the payment has been processed through Borica.
bankTransfer	XML	Optional. Data of associated bank transfer(s), as specified in bankTransferPaymentRequest.

The table below lists available fields in **boricaPaymentTransaction** element. This data can be matched with the data available in the bank account log file for the merchant's virtual pos terminal.

Field Name	Data Type	Description
stan	integer	Transaction identifier (system trace audit number).
dateAndTime	HH:mm:ss dd.MM.yyyy	Transaction date and time.
authIdentResponse	string	Authorization identification response code generated by Borica upon transaction approval.

The table below lists additional fields in **bankTransfer** besides the ones specified in **bankTransferPaymentRequest**. The data can be used to trace the bank transfer. These fields are available after the transfer has been processed by the bank system.

Field Name	Data Type	Description
accountDate	dd.MM.yyyy	Date when the bank transfer has been processed by the bank.



bankStatement	integer	System trace audit number assigned by the bank when processing the transfer.
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Example XML looks like this:

```
<paymentInformationResponse>
  <clientId>21</clientId>
  <merchantId>334</merchantId>
  <paymentId>204</paymentId>
  <amount>350.00</amount>
  <currencyCode>BGN</currencyCode>
  <date>11.04.2006 / 14:11</date>
  <status>Completed</status>
  <onGroundsOf>Goods: Cisco 1721 router</onGroundsOf>
  <deadline>15.04.2006 / 23:59</deadline>
  <autoCloseOnSystemReject>>false</autoCloseOnSystemReject>
  <boricaPaymentTransaction>
    <stan>8571</stan>
    <dateAndTime>13:06:40 11.09.2006</dateAndTime>
    <authIdentResponse>197742</authIdentResponse>
  </boricaPaymentTransaction>
</paymentInformationResponse>
```

An example XML in case of bank transfer payment looks like this:

```
<paymentInformationResponse>
  <clientId>21</clientId>
  <merchantId>334</merchantId>
  <paymentId>205</paymentId>
  <amount>27.60</amount>
  <currencyCode>BGN</currencyCode>
  <date>11.09.2006 / 15:23</date>
  <status>Completed</status>
  <onGroundsOf>Банков превод</onGroundsOf>
  <autoCloseOnSystemReject>>false</autoCloseOnSystemReject>
  <boricaPaymentTransaction>
    <stan>8578</stan>
    <dateAndTime>18:17:24 11.09.2006</dateAndTime>
    <authIdentResponse>198233</authIdentResponse>
  </boricaPaymentTransaction>
  <bankTransfer>
    <recipientName>Петър Петров</recipientName>
    <iban>BG40BUIB98888592829700</iban>
    <amount>27.00</amount>
    <currencyCode>BGN</currencyCode>
```



```

<onGroundsOf>Тест на услуга банков превод</onGroundsOf>
<accountDate>12.09.2006</accountDate>
<bankStatement>500002</bankStatement>
</bankTransfer>
</paymentInformationResponse>

```

Payment Search Response

This information is returned as a result to a merchant payment search request.

Root element is **paymentSearchResponse**. See the table below for a list of available data fields.

Field Name	Data Type	Description
payment	XML	Payment information, in the format of payment information response. This field is contained for each payment that matches the search criteria.

Example XML looks like this:

```

<paymentSearchResponse>
  <payment>
    <clientId>21</clientId>
    <merchantId>334</merchantId>
    <paymentId>204</paymentId>
    <amount>350.00</amount>
    <currencyCode>BGN</currencyCode>
    <date>11.04.2006 / 14:11</date>
    <status>Processing</status>
    <onGroundsOf>Goods: Cisco 1721 router</onGroundsOf>
    <deadline>15.04.2006 / 23:59</deadline>
    <autoCloseOnSystemReject>>false</autoCloseOnSystemReject>
  </payment>
  <payment>
    <clientId>25</clientId>
    <merchantId>334</merchantId>
    <paymentId>334</paymentId>
    <amount>20.50</amount>
    <currencyCode>BGN</currencyCode>
    <date>11.06.2006 / 08:05</date>
    <status>Accepted</status>
    <onGroundsOf>Book: Maximum Linux Security: A Hacker's Guide to Protecting Your
Linux Server and Workstation</onGroundsOf>
  </payment>

```



</paymentSearchResponse>

Payment Update Response

This information is returned as a result to a merchant payment update request.

Root element is **paymentUpdateResponse**. See the table below for a list of available data fields.

Field Name	Data Type	Description
requestAccepted		The presence of this element indicates that the request is valid and the payment is updated (scheduled for update).
notApplicable		This element is present when the update could not be executed because of the current payment status. This status is returned in the currentPaymentStatus attribute.

Example XML looks like this:

```
<paymentUpdateResponse>  
  <requestAccepted/>  
</paymentUpdateResponse>
```

Example XML with negative response:

```
<paymentUpdateResponse>  
  <notApplicable currentPaymentStatus="Processing"/>  
</paymentUpdateResponse>
```