Setting up an enterprise's technical interaction with IPS Assist

A.005.33.01-01.ME

06.11.2019
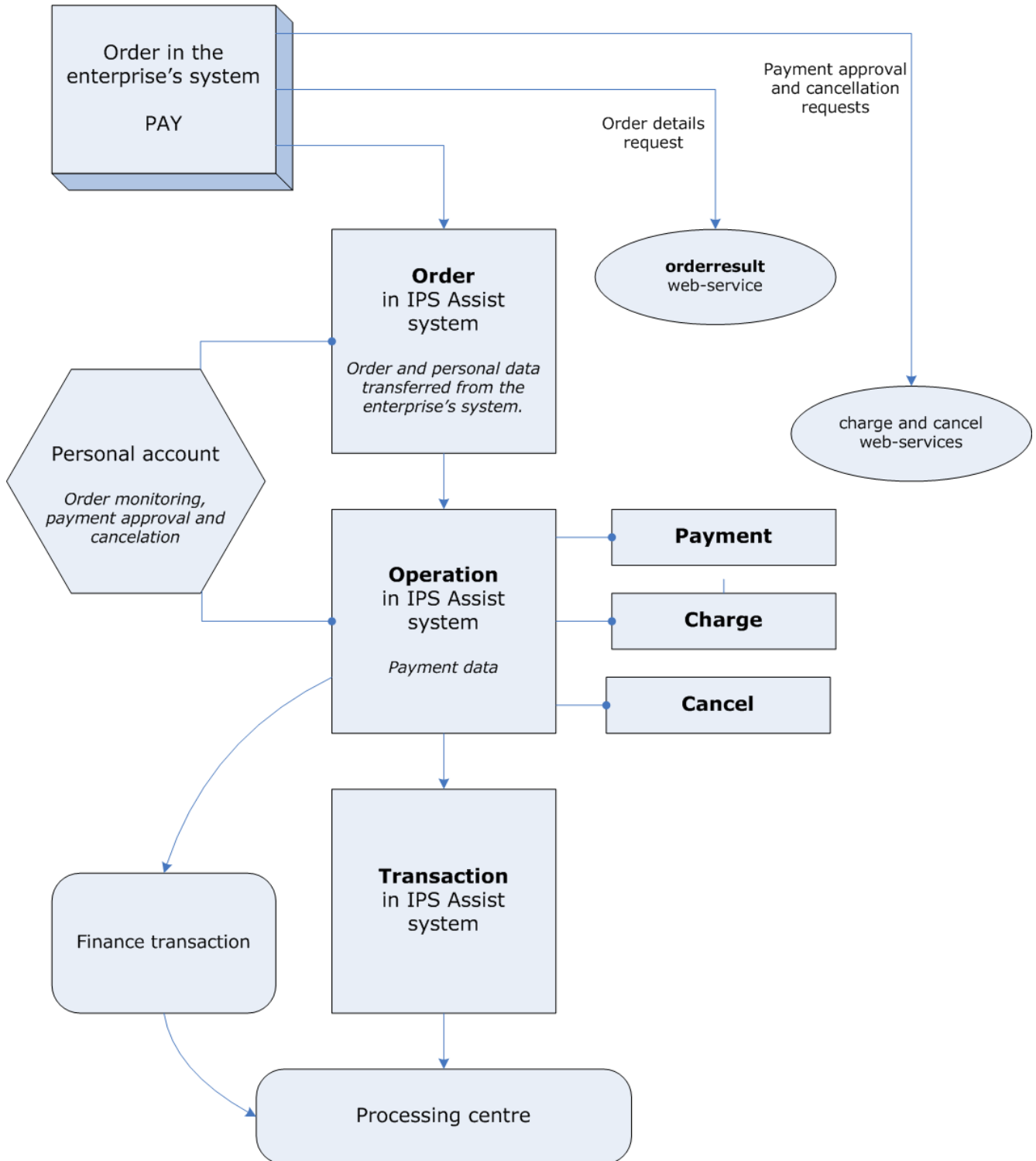
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1. The general scheme of the operation and connection to the system

1.1. The general scheme of the operation

The general scheme of interaction between merchant and Internet Payment System Assist (IPS Assist) is shown on the picture:

1. The buyer creates the order on the pages of the enterprise's web-shop. The new order number, the payment amount and the currency are assigned to order in the enterprise's system. The buyer is being redirected to the payment pages of IPS Assist with necessary payment parameters after pressing the «*Buy*» button.

2. The Order with unique number (billnumber) and passed parameters is created in IPS Assist after receiving the authorization request. Personal data (the order parameters) can be provided within the request or prompted on the IPS Assist payment pages.

3. The buyer choices the way of payment (bankcard, electronic wallet ...). This creates the operation in IPS Assist. The first operation is a payment operation.

   The buyer provides the payment details and presses «*Charge*» button. The payment amount and currency are defined depending of provided value of the original amount, the original currency of the order, and the merchant and the processing settings.

4. The transaction is being created in the IPS Assist after receiving and defining all payment details. The created transaction is being sent to the processing center.

   Depending on the replay from the processing center (successfully or not the authorization has passed) the transaction, the operation and the order in the IPS Assist change their status. After successful payment operation the order status became «*Approved*». There can be only one successful payment operation in the order.

5. The IPS Assist sends the financial transactions to the processing center by the all successful payment operations.

6. When it is necessary the enterprise can cancel the order and return the money to the buyer bankcard. For the order canceling the enterprise should initialize the cancel operation (it can be done from Account or by calling WEB-interface). The cancellation operation can be initialized either before or after financial the transaction (settlements) sending. The IPS Assist will automatically determine a type of transaction that should be created in each specific case.

The enterprise can determine the order status in the IPS Assist using the Order Monitoring in Personal account and via the WEB-services.

Double-stage operation mechanism

1. The buyer creates the order on the pages of the enterprise's web-shop. The new order number, the payment amount and the currency are assigned to order in the enterprise's system. The buyer is being redirected to the payment pages of IPS Assist with necessary payment parameters after pressing the «*Buy*» button.

2. The order with unique number (billnumber) and passed parameters is created in IPS Assist after receiving the authorization request. Personal data (the order parameters) can be provided within the request or prompted on the IPS Assist payment pages.

3. The buyer choices the way of payment (bankcard, electronic wallet ...). This creates the operation in IPS Assist. The first operation is a payment operation. The buyer provides the payment details and presses «*Charge*» button. The payment amount and currency are defined depending of provided value of the original amount, the original currency of the order, and the enterprise and the processing settings.

4. The transaction is being created in the IPS Assist after receiving and defining all payment details. The created transaction is being sent to the processing center.

   Depending on the replay from the processing center (successfully or not the authorization has passed) the transaction, the operation and the order in the IPS Assist change their status. After successful payment operation the order status became *Delayed*. There can be only one successful payment operation in the order.

5. 5.1. After successful finishing of the payment operation the enterprise can initialize the payment confirmation operation in case when the order was successfully completed (goods or services were provided to buyer, ticket was issued and etc.). The order gets the status *Approved* after the successful payment confirmation operation.

   5.2. The IPS Assist sends the financial transactions to the processing center by the all successful payment operations.

5. When it is necessary the enterprise can cancel the order and return the money to the buyer bankcard. For the order canceling the enterprise should initialize the cancel operation (it can be done from Account or by calling WEB-interface). The cancellation operation can be initialized ether before or after financial the transaction (settlements) sending. The IPS Assist will automatically determine a type of transaction which should be created in each specific case.

The enterprise can determine the order status in the IPS Assist using the Order Monitoring in Personal account and via the WEB-services.

1.2. The system connection procedure

In order to use IPS Assist electronic payment system in transactions with the customers, the enterprise shall proceed as follows:

- fill out the registration application form at http://www.assist.ru/shop_register.htm (please, remember the password entered during registration);

- get from IPS Assist the profile of the connection for test mode (the enterprise's unique identifier Merchant_ID, logins and passwords for your Personal account and for ASSIST web services);

- in the part of the enterprise's Internet-shop web site assigned for product selection and order placement, add HTML-code of the form which redirects the customer to IPS Assist server and transmits the order and payment parameters;

- set up all necessary options in your Personal account on page https://account.demo.paysecure.ru;

- perform payments in the enterprise's test mode of operation;

- conclude all necessary agreements with a settlement bank and ASSIST company;

- go to the creation of connection for the operation mode (as described in section 1.4).

1.3. Test mode operation

Setting up of the software of the enterprise's Internet-shop and adjustment of its interaction with IPS Assist should be performed in the test mode of operation. When the enterprise is in the test mode, authorizations take place in IPS Assist test server and are not sent to Payment Center.

In the part of the Internet-shop web site designated for order placement, the enterprise should create an HTML-form that redirects the customer to IPS Assist server and send the payment parameters. Specify the method (GET or POST) and the action for the sent data processing (in UTF-8 coding) in <FORM> element attributes:

```
<FORM METHOD="POST"
ACTION="URL of the server request">
</FORM>
```

The pairs (NAME/VALUE) should be transmitted in the request form for all the set payment parameters. For example, the field with the enterprise's identifier in IPS Assist will look as follows:

```
<INPUT TYPE="HIDDEN" NAME="Merchant_ID" VALUE="Your Merchant_ID">
```

For IPS Assist server to accept a request for the payment authorization, the enterprise should send the following parameters:

- **Merchant_ID –** the enterprise identifier in IPS Assist;
- **OrderNumber –** order number in the enterprise payment system corresponding to a given payment;
- **OrderAmount –** purchase price.

This is the minimum set of payment parameters that is sent by the enterprise, when redirecting a customer to IPS Assist server, after which the customer enters his/her personal data (name, address, e-mail, phone number etc.) and payment means data on IPS Assist authorized payments. An example of a button with all necessary parameters:

```
<FORM ACTION="https://<SERVER-NAME>/pay/order.cfm" METHOD="POST">
<INPUT TYPE="HIDDEN" NAME="Merchant_ID" VALUE="Your Merchant_ID">
<INPUT TYPE="HIDDEN" NAME="OrderNumber" VALUE=" B20042011_27">
<INPUT TYPE="HIDDEN" NAME="OrderAmount" VALUE="205.50">
<INPUT TYPE="HIDDEN" NAME="OrderComment" VALUE="An example of an order payment">
<INPUT TYPE="SUBMIT" NAME="Submit" VALUE="Buy">
</FORM>
```

A customer, however, often enters his/her personal information (name, address, e-mail etc.) on the enterprise pages during registration. The enterprise can send this information along with the payment parameters. In this case a customer enters on IPS Assist pages only the payment means data.

An example of a button with the payment parameters and a customer's personal data:

```
<FORM ACTION="https://<SERVER-NAME>/pay/order.cfm" METHOD="POST">
<INPUT TYPE="HIDDEN" NAME="Merchant_ID" VALUE="Your Merchant_ID">
<INPUT TYPE="HIDDEN" NAME="OrderNumber " VALUE="A03032011_26">
<INPUT TYPE="HIDDEN" NAME="OrderAmount" VALUE="66.66">
<INPUT TYPE="HIDDEN" NAME="OrderCurrency" VALUE="RUB">
<INPUT TYPE="HIDDEN" NAME="FirstName" VALUE="Test">
<INPUT TYPE="HIDDEN" NAME="LastName" VALUE="Testov">
<INPUT TYPE="HIDDEN" NAME="Email" VALUE="test@assist.ru">
<INPUT TYPE="HIDDEN" NAME="OrderComment" VALUE="An example of an order payment">
<INPUT TYPE="SUBMIT" NAME="Submit" VALUE="Pay">
</FORM>
```

For a detailed information about all the authorized request parameters refer to section 2.1.

In the test mode of operation for the order payment you should use the test cards given in Table 5.13 of the Annex.

The message "Test Mode" is displayed on the authorized pages in the test mode; the message example is given on the result page:

Note! If you need to perform a test payment after switching to the operating mode you should contact the support service support@assist.ru.

1.4. Switching for the operation mode

Proceed as follows after successful completion of the testing phase in order to switch the enterprise for the operation mode:

- conclude all necessary agreements with a settlement bank and ASSIST, LLC;
- receive a confirmation from the support service (support@assist.ru) that the technical connection of your enterprise on ASSIST side has been completed, and the enterprise has been switched over for the operation mode;
- receive from support service (support@assist.ru) the profile of the connection for operation mode (the enterprise's unique identifier Merchant_ID, logins and passwords for your Personal account and for ASSIST web services), the URL for operation mode and change all the enterprise request URLs (authorization, results receiving and etc.);
- set up all necessary options in your Personal account on page https://account.paysecure.ru/;
- provide access for your Internet-shop users to the payment form.

Attention! In the operation mode all requests should be sent only to the URL provided by the ASSIST support services staff. It is not recommended to restrict access to services or to payment pages of IPS Assist by IP addresses. This can lead to the inability to interact with the IPS Assist because the gateway is physically distributed between data centers and works from different subnets depending on the situation. If you nevertheless need to restrict incoming/outgoing traffic, then you can get the actual list of our subnets by using one of the following commands:

- for Windows: *nslookup -q=TXT _netblocks.paysecure.ru*;
- for Linux: *dig _netblocks.paysecure.ru txt +short*.

List of main URLs for connection with IPS Assist

Service name	URL
Authorization	https://<SERVER-NAME>/pay/order.cfm
Financial confirmation of payment	https://<SERVER-NAME>/charge/charge.cfm
Receiving status by order number	https://<SERVER-NAME>/orderstate/orderstate.cfm
Receiving operations results by order number	https://<SERVER-NAME>/orderresult/orderresult.cfm
Payment cancellation and cash return	https://<SERVER-NAME>/cancel/wscancel.cfm
Operations results within a specified period	https://<SERVER-NAME>/resultbydate/resultbydate.cfm
Recurring payments	https://<SERVER-NAME>/recurrent/rp.cfm

Attention!

For connection in **the test mode** you should use **payments.demo.paysecure.ru** as the domain name <SERVER-NAME>.

For connection in **the operation mode** you should use the received from support service (support@assist.ru) value as the domain name <SERVER-NAME>.

2. Payment parameters sending

2.1. List of the authorized request parameters

URL of the authorization request is https://<SERVER-NAME>/pay/order.cfm

The full list of the authorized request parameters is given in table below:

Parameter	Mandatory field	Adopted values	Default value	Description
Merchant_ID	Yes	Number		The enterprise identifier in IPS Assist
OrderNumber	Yes	128 characters		Order number in the merchant payments system
Delay	No	0 – one-stage operation 1 – double-stage operation	0	Attribute of a bankcard authorization for the double-stage operation mode.
Language	No	RU – Russian, EN – English	Language of legal entity/enterprise	Language of authorized pages
OrderComment	No	256 characters		Comment.
OrderAmount	Yes	Number, 15 digits (delimiter: '.')		Payment amount, in original currency (e.g., 10.34).
OrderCurrency	No	3 characters	Currency of legal entity/enterprise	Code of currency of the **OrderAmount** (For currency codes refer to Table 5.8 of the Annex).
Lastname	No	70 characters		Customer's last name.
Firstname	No	70 characters		Customer's first name.
Middlename	No	70 characters		Customer's middle name.
Email	No	128 characters		Customer's e-mail.
Address	No	256 characters		Customer's address.
HomePhone	No	64 characters		Customer's home phone number.
WorkPhone	No	20 characters		Customer's work phone number.
MobilePhone	No	20 characters		Customer's mobile phone number.
Fax	No	20 characters		Customer's fax number.
Country	No	3 characters		Customer's country.
State	No	3 characters		Customer's region.
City	No	70 characters		Customer's city.
Zip	No	25 characters		Customer's post zip code.
URL_RETURN	No	256 characters		Page URL, to where a customer should return after performing his/her payment in the system (option "*Go to the shop page*" should be enabled in merchant's settings in Personal account).). It is recommended to use HTTPS protocol for secure communication.
URL_RETURN_OK	No	256 characters	URL_RETURN parameter value, or, if none, return URL parameter after successful authorization, specified in Personal account	Page URL, to where a customer should return after successful performing his/her payment in IPS Assist (option "*Go to the shop page*" should be enabled in merchant's settings in Personal account)). It is recommended to use HTTPS protocol for secure communication.

Parameter	Mandatory field	Adopted values	Default value	Description
URL_RETURN_NO	No	256 characters	URL_RETURN parameter value, or, if none, return URL specified in Personal account	Page URL, to where a customer should return if the payment is not performed in IPS Assist or payment is still in progress (current payment status "*In Progress*"), see details section 2.2. The option "*Go to the shop using return URL*" should be enabled in merchant's settings in Personal account. It is recommended to use HTTPS protocol for secure communication.
CardPayment	No	1 – pay using bankcard,; 0 – without using bankcard	1	A customer can perform his/her payment using bankcard, if parameter value 1 has been sent, or the parameter is missing (and bankcard payments are enable for the enterprise)
YMPayment	No	1 – use YandexMoney payment system, 0 – without using YandexMoney	1	A customer can perform his/her payment using YandexMoney payment system, if parameter value 1 has been sent, or the parameter is missing (and YandexMoney payments are enable for the enterprise)
WMPayment	No	1 – use WebMoney payment system, 0 – without using WebMoney	1	A customer can perform his/her payment using WebMoney payment system, if parameter value 1 has been sent, or the parameter is missing (and WebMoney payments are enable for the enterprise)
QIWIPayment	No	1 – use QIWI payment system, 0 – without using QIWI	1	A customer can perform his/her payment using QIWI payment system, if parameter value 1 has been sent, or the parameter is missing (and QIWI payments are enable for the enterprise)
QIWIMtsPayment	No	1; 0	1	Payment with mobile phone money (MTS)
QIWIMegafonPayment	No	1; 0	1	Payment with mobile phone money (Megafon)
QIWIBeelinePayment	No	1; 0	1	Payment with mobile phone money (Beeline)
QIWITele2Payment	No	1; 0	1	Payment with mobile phone money (Tele2)
Signature	No	String		The string is joined from the following order parameters: Merchant_ID;OrderNumber;OrderAmount;OrderCurrency with semicolon as delimiter. Then the MD5 hash prepared from this string. Hash is signed by private RSA key of the merchant. Key length - 1024. Received bit sequence is a signature. Signature is transferred BASE64 coded string.
Checkvalue	No	String		Request validation code. The string has to be generated as follows: uppercase(md5(uppercase(md5(SALT) + md5(X)))), where SALT – secret word; X – result of the following parameters string concatenation: merchant_id, ordernumber, orderamount, ordercurrency with semicolon as delimiter, + means string concatenation. **Note.** If the merchant uses request validation code without delimiters, please, contact the support team support@assist.ru

Parameter	Mandatory field	Adopted values	Default value	Description
MobileDevice	No	0 – use merchant's settings; 1 –standard pages; 2 - pages for mobile devices.	0	Payment pages type (standard or for mobile devices). If no values passed for this parameter in the request then default merchant setting is used (standard pages). In order to switch to the device auto detection mode, please, contact the support team support@assist.ru.
RecurringIndicator	No	1 – recurrent payment 0 – nonrecurrent payment	0	Recurring payment indicator
RecurringMinAmount	No/Yes	Number, 15 digits		Min amount of recurrent payments. Mandatory if RecurringIndicator = 1
RecurringMaxAmount	No/Yes	Number, 15 digits		Max Amount of recurrent payments. Mandatory if RecurringIndicator = 1
RecurringPeriod	No/Yes	Number, 10 digits		Frequency of recurrent payments in days. Mandatory if RecurringIndicator = 1
RecurringMaxDate	No/Yes	Date as string in DD.MM.YYYY format		The end date of recurrent payments. Mandatory if RecurringIndicator = 1
GooglePayPayment	No	1; 0	0	Payment via GooglePay attribute (=1)
ApplePayPayment	No	1; 0	0	Payment via ApplePay attribute (=1)
SamsungPayPayment	No	1; 0	0	Payment via SamsungPay attribute (=1)
FastPayPayment	No	1; 0	0	Permission to pay via Faster Payment System (=1)

Note. All request parameters are automatically validated. The validation rules are described in Table 5.15 of the Annex.

If more than one parameter specifying the type of payment means (CardPayment, WMPayment etc.) has value 1, a customer can choose a method of payment on the payments page of IPS Assist. If these parameters are not sent, a user can also select a method of payment on IPS Assist payment page from all those available for this enterprise. If all these parameters have the value 0, then it results to error.

An example of a button with all necessary parameters:

```
<FORM ACTION="https://<SERVER-NAME>/pay/order.cfm" METHOD="POST">
<INPUT TYPE="HIDDEN" NAME="Merchant_ID" VALUE="Your Merchant_ID">
<INPUT TYPE="HIDDEN" NAME="OrderNumber" VALUE="A20042011_28">
<INPUT TYPE="HIDDEN" NAME="OrderAmount" VALUE="237.40">
<INPUT TYPE="HIDDEN" NAME="OrderCurrency" VALUE="USD">
<INPUT TYPE="HIDDEN" NAME="Delay" VALUE="0">
<INPUT TYPE="HIDDEN" NAME="Language" VALUE="RU">
<INPUT TYPE="HIDDEN" NAME="Email" VALUE="test@test.ru">
<INPUT TYPE="HIDDEN" NAME="OrderComment" VALUE="Order payment 28-A">
<INPUT TYPE="HIDDEN" NAME="URL_RETURN_OK" VALUE="http://www.URL.ru/yes">
<INPUT TYPE="HIDDEN" NAME="URL_RETURN_NO" VALUE="http://www.URL.ru/no">
<INPUT TYPE="HIDDEN" NAME="CardPayment" VALUE="1">
<INPUT TYPE="HIDDEN" NAME="WMPayment" VALUE="0">
<INPUT TYPE="HIDDEN" NAME="YMPayment" VALUE="0">
<INPUT TYPE="SUBMIT" NAME="Submit" VALUE="Buy">
</FORM>
```

After pressing this button, a customer is redirected to the authorized pages of IPS Assist, where he/she can enter the other personal data and perform payments using his/her bankcard. The information, such as a customer's first name, second name and e-mail are mandatory (the

parameters Firstname, Lastname, Email) and should be either send in the authorized request, or entered on the payment page.

Please, note that the original amount and the currency code send by the enterprise in the payment parameters, when redirecting a customer to the authorized pages of IPS Assist, can differ from the authorization amount and currency. The authorization amount and currency are the amount and currency that were sent to Processing Center for the bankcard authorization (the amount is normally in Roubles). For example, if the payment original amount is 100 USD, then the authorization amount made 05.04.2011 equals to 2822.77 RUB.

After successful payment, the order in IPS Assist adopts the status **_Approved_**; all possible order statuses are given in Table 5.1 of the Annex.

2.2. Customer's return to Internet shop page after purchase

After performing payment in IPS Assist a customer can see the page with the information of the payment results (for example, "_Completed_"), as well as the payment, customer and enterprise data.

You can also set up a customer's automatic redirecting to the enterprise web site after performing the payment in IPS Assist. For this, after the authorization select the action "_Go to the shop's page_" in Personal account in the section "_Merchants settings_", tab "_Payments settings_". If the authorization is successful, a customer is redirected to the address that you specified in the parameter URL_RETURN_OK. In the other cases a customer is redirected to the address specified in the parameter URL_RETURN or URL_RETURN_NO. However, during the authorization by bankcard this address is supplemented with the parameters Billnumber (complete unique order number in IPS Assist) and OrderNumber (order number in the enterprise payments system) corresponding to the given payment, in the following format:

```
http://URL return/?billnumber=complete_unique_order_number&ordernumber=order_number
```

If the parameters URL_RETURN_OK and URL_RETURN_NO are not sent in the authorization request, then URL_RETURN parameter value is used for a customer's automatic redirection. If this parameter is also not sent, then the return URL_RETURN_OK and URL specified in "_Merchants settings_" section in Personal account are used.

Note. When customer returns to the merchant site the value of the order number is always transmitted as URL-encoded string: all non alpha-numeric characters (except '-' and '_'.) are replaced by the percent sign '%' followed by two digits hex code; spaces are replaced by '+' sign. This is important when the order number contains characters of non latin alphabet or some special symbols.

When using the option of a customer's return to the shop, it is recommended to sent an additional request about the authorization result to IPS Assist server after receiving data about the paid order at URL_RETURN_OK (for information about the authorization result request refer to section 3.3) in order to make sure the order payments have been performed. It is recommended

as well to send an additional request about the authorization result to IPS Assist server after receiving data about the paid order at URL_RETURN and URL_RETURN_NO, because a customer is redirected to these addresses with different payment state, including the state "*In process*".

2.3. Double-stage operation mode

The processes of bankcard authorization (payment operation) and financial transaction (financial confirmation) in the double-stage operation mode are split.

2.3.1. Bankcard payment operation

At the first stage, the bankcard is authorized, its credit status is verified and the funds at the client's account are blocked. If the enterprise uses the double-stage operation mode, then, besides the mandatory and additional payment parameters (as described in section 2.1), there is a need to send the parameter **Delay=1** in the authorization request.

```
<FORM ACTION=" https://<SERVER-NAME>/pay/order.cfm" METHOD="POST">
<INPUT TYPE="HIDDEN" NAME="Merchant_ID" VALUE="Your Merchant_ID">
<INPUT TYPE="HIDDEN" NAME="OrderNumber" VALUE="A20042011_28">
<INPUT TYPE="HIDDEN" NAME="OrderAmount" VALUE="237.40">
<INPUT TYPE="HIDDEN" NAME="OrderCurrency" VALUE="USD">
<INPUT TYPE="HIDDEN" NAME="Delay" VALUE="1">
<INPUT TYPE="HIDDEN" NAME="Language" VALUE="RU">
<INPUT TYPE="HIDDEN" NAME="Email" VALUE="test@test.ru">
<INPUT TYPE="HIDDEN" NAME="OrderComment" VALUE="Order payment 28-A">
<INPUT TYPE="HIDDEN" NAME="URL_RETURN_OK" VALUE="http://www.URL.ru/yes">
<INPUT TYPE="HIDDEN" NAME="URL_RETURN_NO" VALUE="http://www.URL.ru/no">
<INPUT TYPE="HIDDEN" NAME="CardPayment" VALUE="1">
<INPUT TYPE="HIDDEN" NAME="WMPayment" VALUE="0">
<INPUT TYPE="HIDDEN" NAME="YMPayment" VALUE="0">
<INPUT TYPE="SUBMIT" NAME="Submit" VALUE="Buy">
</FORM>
```

After pressing this button, a customer is automatically redirected to IPS Assist payment pages, where he/she enters his/her personal data and the card information for the payment operation to be completed. The payment operation can be both successfully completed and failed. After successfully completing the payment operation in the enterprise's double-stage operation mode, the order adopts the status **Delayed** in IPS Assist (Payment confirmation in process); order statuses are listed in Table 5.1 of Annex.

At the second stage, after successfully completed payment operation, the enterprise performs the payment confirmation operation. A financial transaction is sent for processing only after the payment has been confirmed.

Attention! When the double-stage operation mode is used the customer's account is withdrawn only after the payment has been confirmed by Internet-shop.

2.3.2. Payment confirmation

Internet-shop can issue a financial confirmation within 4 days in Personal account, or using Web service.

To confirm the payment, send a request to IPS Assist server via HTTP POST or SOAP method (in UTF-8 coding).

The request URL for the financial confirmation transmission:

https://<SERVER-NAME>/charge/charge.cfm.

List of payment confirmation parameters for the enterprise's double-stage operation mode is given in table below:

Parameter	Mandatory field	Adopted values	Default values	Description
Billnumber	Yes	15 or 16 digits, extended payment number		Unique number of payment corresponding to the order number in IPS Assist; extended payment number can be passed
Merchant_ID	Yes	Number		The enterprise identifier in IPS Assist
Login	Yes	20 characters		Login (Latin letters, digits and symbol _)
Password	Yes	30 characters		Password (Latin letters and digits)
Amount	No*	Number		The amount of financial confirmation
Currency	No*	3 characters		Confirmation currency code. Only the currency code of the payment operation can be used.
ClientIP	No			IP-address of the operator's computer that confirms the payment
Language	No	RU – Russian EN – English	RU	Language of the results output
Format	No	1 – CSV (delimited fields) 2 – WDDX 3 – XML 4 – SOAP	1	Format of the results output

* The parameters ***Amount*** and ***Currency*** can be passed or missed in the request only simultaneously. If the above parameters are missing, the full amount confirmation operation will be performed.

Note. All request parameters are automatically validated. The validation rules are given in Table 5.15 of the Annex.

The confirmation can be performed to both the complete amount and a part of the amount. It is allowed to issue a partial confirmation of amount not exceeding the amount of payment, if the payment operation by bankcard was completed through processing with correspondent settings.

Please, note that confirmation amount should be provided (using both Personal account and Web service) in the same currency which was used in the payment operation (normally, in Roubles).

The parameter *billnumber* can be passed either in ordinary format (when there was only one successful payment on this order) or in extended format in the confirmation. While using the extended format it is required to provide the exact number of the successful authorization

operation (in some cases it can be not a first operation in the order, 500000000000001.2 for example).

The payment confirmation operation is always successful, unless declined due to technical failure. In case of a technical failure, the payment should be confirmed again. The repeated payment confirmation does not result in a repeated cash withdrawal.

If the payment has been successfully confirmed, the order in IPS Assist adopts the status **Approved**, the Response_code is AS000.

The service description for SOAP format can be found on page:

https://<SERVER-NAME>/charge/charge.wsdl

The list of response parameters:

Parameter	Value
ordernumber	Order number
responsecode	Response code
recommendation	Recommendations
message	Message
ordercomment	Comment
orderdate	Date of order
amount	Operation amount
currency	Currency of operation
meantypename	Type of payment means
meannumber	Number of payment means
lastname	Payer's last name
firstname	Payer's first name
middlename	Payer's middle name
issuebank	Name of issue bank
Email	Payer's e-mail
bankcountry	Country of issue bank
rate	Currency rate
approvalcode	Authorization code
meansubtype	Payment means subtype
cardholder	Payment means holder
cardexpirationdate	Card expired date
ipaddress	Payer's IP-address
protocolname	Protocol
testmode	Test mode
customermessage	Result message for a customer
orderstate	Order state
processingname	Processing
operationtype	Operation type
billnumber	Billnumber extended format
orderamount	Original amount of operation

Parameter	Value
ordercurrency	Original currency of operation
slipno	Financial transaction identifier
packetdate	Request issue date
signature	Signature

2.3.3. Examples

Request example for HTTP POST format:

```
<FORM ACTION="https://<SERVER-NAME>/charge/charge.cfm" METHOD="POST">
<INPUT TYPE="HIDDEN" NAME="BillNumber" VALUE="545000000000001">
<INPUT TYPE="HIDDEN" NAME="Merchant_ID" VALUE="Your Merchant_ID">
<INPUT TYPE="HIDDEN" NAME="Login" VALUE="Your login">
<INPUT TYPE="HIDDEN" NAME="Password" VALUE="Your password">
<INPUT TYPE="HIDDEN" NAME="Amount" VALUE="100">
<INPUT TYPE="HIDDEN" NAME="Currency" VALUE="RUR">
<INPUT TYPE="HIDDEN" NAME="Language" VALUE="0">
<INPUT TYPE="HIDDEN" NAME="Format" VALUE="3">
<INPUT TYPE="SUBMIT" NAME="Submit" VALUE="Execute">
</FORM>
```

The result of payment financial confirmation request in CSV format:

```
ordernumber: 0001-01 responsecode: AS000 recommendation: message: Completed.
ordercomment: test payment orderdate: 01.01.2011 09:00:05 amount: 100.00 currency:
RUB meantypename: VISA meannumber: 411111****1111 lastname: Testov firstname:
Test middlename: Testovich issuebank: BANK email: test@testpost.ru bankcountry: Russia
rate: 1 approvalcode: meansubtype: Corporate Purchasing Card cardholder: TEST
cardexpirationdate:12/20 ipaddress: 111.23.11.23 protocoltypename: testmode: 1
customermessage: Completed. orderstate: Approved processingname: Name
operationtype: 200 billnumber: 511111100000001.2 orderamount: 100.00
ordercurrency: RUB slipno: 111111 packetdate: 01.01.2011 09:01:47 signature:
```

In XML format:

```
<?xml version='1.0' encoding='utf-8' standalone='yes'?>
<!DOCTYPE result [
<!ATTLIST result
        firstcode CDATA #REQUIRED
        secondcode CDATA #REQUIRED
        count CDATA #REQUIRED>
<!ELEMENT result (orders?)>
<!ELEMENT orders (order)>
<!ELEMENT order (ordernumber?, responsecode?, recommendation?, message?,
ordercomment?, orderdate?, amount?, currency?, meantypename?, meannumber?, lastname?,
firstname?, middlename?, issuebank?, email?, bankcountry?, rate?, approvalcode?,
meansubtype?, cardholder?, cardexpirationdate?, ipaddress?, protocoltypename?, testmode?,
customermessage?,  orderstate?, processingname?, operationtype?, billnumber?, orderamount?,
ordercurrency?, slipno?, packetdate?, signature?, pareq?, acsurl?)>
<!ELEMENT ordernumber (#PCDATA)>
<!ELEMENT responsecode (#PCDATA)>
<!ELEMENT recommendation (#PCDATA)>
<!ELEMENT message (#PCDATA)>
<!ELEMENT ordercomment (#PCDATA)>
<!ELEMENT orderdate (#PCDATA)>
<!ELEMENT amount (#PCDATA)>
<!ELEMENT currency (#PCDATA)>
<!ELEMENT meantypename (#PCDATA)>
<!ELEMENT meannumber (#PCDATA)>
<!ELEMENT lastname (#PCDATA)>
<!ELEMENT firstname (#PCDATA)>
<!ELEMENT middlename (#PCDATA)>
```

```
<!ELEMENT issuebank (#PCDATA)>
<!ELEMENT email (#PCDATA)>
<!ELEMENT bankcountry (#PCDATA)>
<!ELEMENT rate (#PCDATA)>
<!ELEMENT approvalcode (#PCDATA)>
<!ELEMENT meansubtype (#PCDATA)>
<!ELEMENT cardholder (#PCDATA)>
<!ELEMENT cardexpirationdate (#PCDATA)>
<!ELEMENT ipaddress (#PCDATA)>
<!ELEMENT protocoltypename (#PCDATA)>
<!ELEMENT testmode (#PCDATA)>
<!ELEMENT customermessage (#PCDATA)>
<!ELEMENT orderstate (#PCDATA)>
<!ELEMENT processingname (#PCDATA)>
<!ELEMENT operationtype (#PCDATA)>
<!ELEMENT billnumber (#PCDATA)>
<!ELEMENT orderamount (#PCDATA)>
<!ELEMENT ordercurrency (#PCDATA)>
<!ELEMENT slipno (#PCDATA)>
<!ELEMENT packetdate (#PCDATA)>
<!ELEMENT signature (#PCDATA)>
<!ELEMENT pareq (#PCDATA)>
<!ELEMENT acsurl (#PCDATA)>]>
 <result firstcode="0" secondcode="0" count="1">
<orders> <order>
<ordernumber> 0001-01 </ordernumber>
<responsecode> AS000 </responsecode>
<recommendation>  </recommendation>
<message> Completed. </message>
<ordercomment> test payment </ordercomment>
<orderdate> 01.01.2011 10:51:53 </orderdate>
<amount> 100.00 </amount>
<currency> RUB </currency>
<meantypename> VISA </meantypename>
<meannumber> 411111****1111 </meannumber>
<lastname> Testov </lastname>
<firstname> Test </firstname>
<middlename> Testovich </middlename>
<issuebank> BANK </issuebank>
<email> test@testpost.ru </email>
<bankcountry> Russia </bankcountry>
<rate> 1 </rate>
<approvalcode>  </approvalcode>
<meansubtype> Corporate Purchasing Card </meansubtype>
<cardholder> TEST </cardholder>
<cardexpirationdate> 12/20 </cardexpirationdate>
<ipaddress> 10.23.10.23 </ipaddress>
<protocoltypename>  </protocoltypename>
<testmode> 1 </testmode>
<customermessage> Completed. </customermessage>
<orderstate> Approved </orderstate>
<processingname> Name </processingname>
<operationtype> 200 </operationtype>
<billnumber> 511111100000001.2 </billnumber>
<orderamount> 100.00 </orderamount>
<ordercurrency> RUB </ordercurrency>
<slipno>111111</slipno>
<packetdate> 01.01.2011 10:53:45 </packetdate>
<signature> </signature>
</order> </orders>
</result>
```

Six first and last four digits of the card number are returned as the field <cardnumber> value here and after in all Web services; the remaining figures being hidden under * symbol.

If the payment is successfully confirmed, the field "*orderstate*" will contain the value *"**Approved**"*, the confirmation operation response_code is AS000. If the payment confirmation is not confirmed, the response_code will adopt the values AS100- AS998.

The field <slipno> is used only for processings: UCS, Raiffeisenbank, Multicard and Russian Standard. The values of this parameter in result requests are described in the Table 5.14 of the Annex. If payment confirmation will not be sent (*charge* service was not called), the financial transaction is not sent to the processing and such transaction will not appear in the processing report for enterprise.

An example of a result request in XML format which returned an error (wrong password):

```
<?xml version="1.0" encoding="utf-8" standalone="yes" ?>
<!DOCTYPE result (View Source for full doctype...)>
<result firstcode="7" secondcode="102" count="0"></result>
```

For description of the first and second codes of the automated interfaces refer to Table 5.12 of the Annex.

In SOAP format:

```
<?xml version='1.0' encoding='utf-8' standalone='no'?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV='http://schemas.xmlsoap.org/soap/envelope/' SOAP-
ENV:encodingStyle='http://schemas.xmlsoap.org/soap/encoding/'
xmlns:xsi='http://www.w3.org/2001/XMLSchema-instance'
xmlns:xsd='http://www.w3.org/2001/XMLSchema'>
<SOAP-ENV:Body SOAP-ENV:encodingStyle='http://schemas.xmlsoap.org/soap/encoding/'>
<ASS-NS:MakeChargeResponse xmlns:ASS-NS='http://www.paysecure.ru/message/'>
<return xmlns:si='http://www.paysecure.ru/type/' xsi:type='si:SOAPStruct'>
<ordernumber xsi:type='xsd:string'>0001-01</ordernumber>
<responsecode xsi:type='xsd:string'>AS000</responsecode>
<recommendation xsi:type='xsd:string'></recommendation>
<message xsi:type='xsd:string'>Completed.</message>
<ordercomment xsi:type='xsd:string'>test payment</ordercomment>
<orderdate xsi:type='xsd:string'>01.01.2011 11:23:13</orderdate>
<amount xsi:type='xsd:string'>100.00</amount>
<currency xsi:type='xsd:string'>RUB</currency>
<meantypename xsi:type='xsd:string'>VISA</meantypename>
<meannumber xsi:type='xsd:string'>411111****1111</meannumber>
<lastname xsi:type='xsd:string'>Testov</lastname>
<firstname xsi:type='xsd:string'>Test</firstname>
<middlename xsi:type='xsd:string'>Testovich</middlename>
<issuebank xsi:type='xsd:string'>New Bank</issuebank>
<email xsi:type='xsd:string'>test@testpost.ru</email>
<bankcountry xsi:type='xsd:string'>Russia</bankcountry>
<rate xsi:type='xsd:string'>1</rate>
<approvalcode xsi:type='xsd:string'></approvalcode>
<meansubtype xsi:type='xsd:string'>Classic</meansubtype>
<cardholder xsi:type='xsd:string'>TEST</cardholder>
<cardexpirationdate xsi:type='xsd:string'>12/20</cardexpirationdate>
<ipaddress xsi:type='xsd:string'>11.23.11.23</ipaddress>
<protocoltypename xsi:type='xsd:string'></protocoltypename>
<testmode xsi:type='xsd:string'>1</testmode>
<customermessage xsi:type='xsd:string'>Completed.</customermessage>
<orderstate xsi:type='xsd:string'>Approved</orderstate>
<processingname xsi:type='xsd:string'>Name</processingname>
<operationtype xsi:type='xsd:string'>200</operationtype>
<billnumber xsi:type='xsd:string'>511111100000001.2</billnumber>
<orderamount xsi:type='xsd:string'>100.00</orderamount>
<ordercurrency xsi:type='xsd:string'>RUB</ordercurrency>
<slipno xsi:type='xsd:string'>111111</slipno>
```

```
<packetdate xsi:type='xsd:string'>01.01.2011 11:28:26</packetdate>
<signature xsi:type='xsd:string'></signature>
</return>
</ASS-NS:MakeChargeResponse></SOAP-ENV:Body>  </SOAP-ENV:Envelope>
```

3. Receiving the authorization results

The enterprise owner can check results of payments, which have been performed in the Internet-shop in IPS Assist via Personal account, section "*Orders monitoring*".

In Personal account you can also subscribe for notification letters on the results of executed operations to be sent to your e-mail, activate a service for sending daily registers in files, set up the synchronized payments results dispatch to the enterprise server.

In addition, you can use Web service and get the order payment results in the response to IPS Assist server request.

Attention! In order to avoid possible financial losses the enterprise should check that the order data from own system corresponds to the payment authorization data received by any of the described above methods. It is extremely important to pay attention to the payment amount and payment mode (test or operating mode).

We strongly recommend to use the order *signature* or *checkvalue* upon the transmission of authorization request for the order creation. The enterprise also should check the *checkvalue* upon receive the replay from the web-service for obtaining the status by order number (see section 3.3) or the request for the operations results by the order number (see section 3.4), or the operations results within a specified period (see section 4.2), or while receiving the result of the payment on the enterprise's server (see section 3.5).

3.1. Receiving notifications via e-mail

The owner will receive notification letters about the results of every single operation executed in Internet-shop via IPS Assist to his/her e-mail specified in Personal account in Section "*Merchants settings*", tab "*Register and notification sending settings*".

An example of a notification letter:

```
Billnumber: 000000000000001 OperationType: Payment OrderNumber:0001-01 Total:125
Currency:RUB Status:Approved Comment: TEST Response_Code:AS000 MeanType:
MasterCard
```

3.2. Daily operations register

The enterprise owner can also subscribe for daily register of operations executed per day. You can activate the service and specify your e-mail address for receiving the registers in Personal account, Section "*Merchants settings*" (tab "*Register and notification sending setting*"). A letter with an attached zip-file containing information about operations per last day will be sent to your e-mail every day.

An example of a header and string from a daily register:

```
BillNumber;BillNumberExt;OrderNumber;OrderState;OrderTest;OrderAmount;OrderCurrenc
y;OrderDate;OrderComment;CustomerName;OperationType;OperationState;Protocol;Opera
tionAmount;OperationCurrency;OperationDate;MeanType;MeanSubType;MeanNumber;Card
Holder;OperationResult;ErrorMessage;Recommendation;Response_Code;ApprovalCode;Pro
cessingName;Address;Email;Clienip;BankCountry;Bank;
500000000000000; 500000000000000.1;14062012-1;Approved;0;21.00;RUB;14.06.2012
12:36:57 (GMT +00:00);test payment;Testov Test
T.;Approve;Success;NET;21.00;RUB;14.06.2012 12:36:58 (GMT
+00:00);MasterCard;Standart;411111****1111;TEST;Success;
;;AS000;X45529;Fake;;test@test.ru;10.10.10.333;Russia;Bank;
```

3.3. Receiving status by order number

The enterprise can also find out the payment result (order status) by the order number using Web service. All possible order statuses are listed in Table 5.1 of the Annex.

To receive the payment result by order number, send a request to IPS Assist server via HTTP POST or SOAP method (in UTF-8 coding).

The request URL for receiving the order status:

https://<SERVER-NAME>/orderstate/orderstate.cfm.

The order search using Web service can be performed only for the specified time period. For this, you have to specify the time period, when the order payments started to be performed using the parameters STARTDAY, STARTMONTH, STARTYEAR setting forth the sampling starting date, and the parameters ENDDAY, ENDMONTH, ENDYEAR setting forth the sampling end date. If the parameters are not specified, or incorrectly specified, the default values will be applied. The default sampling end date is taken to be the current date, while the default sampling start date is the current date, minus three days.

List of request parameters:

Parameter	Mandatory field	Adopted values	Default value	Description
Ordernumber	Yes	String 128 characters		Order number
Merchant_ID	Yes	Number		The enterprise identifier in IPS Assist
Login	Yes	8-20 characters		Login (Latin letters, digits and symbol _)
Password	Yes	8-20 characters		Password (Latin letters and digits)
StartYear	No	Year in "2011" format	Minus three days from the current date	Sampling start date (GMT)
StartMonth	No	1-12	Minus three days from the current date	
StartDay	No	1-31	Minus three days from the current date	
StartHour	No	0-23	Minus three days from the current date	
StartMin	No	0-59	Minus three days from the current date	
EndYear	No	Year in "2011"	Current year	Sampling end date (GMT)

Parameter	Mandatory field	Adopted values	Default value	Description
		format		
EndMonth	No	1-12	Current month	
EndDay	No	1-31	Current day	
EndHour	No	0-23	Current hour	
EndMin	No	0-59	Current minute	
Format	No	1 – CSV 2 – WDDX 3 – XML 4 - SOAP	4	Format of the results output

Note. All request parameters are automatically validated. The validation rules are given in the Table 5.15 of the Annex.

An example of HTTP POST request for receiving a status of order 1001-01 whose payment started on April 1, 2011 (GMT):

```
〈FORM ACTION="https://<SERVER-NAME>/orderstate/orderstate.cfm" METHOD="POST">
<INPUT TYPE="HIDDEN" NAME="Ordernumber" VALUE="1001-01">
<INPUT TYPE="HIDDEN" NAME="Merchant_ID" VALUE="Your Merchant_ID">
<INPUT TYPE="HIDDEN" NAME="Login" VALUE="Your login">
<INPUT TYPE="HIDDEN" NAME="Password" VALUE="Your password">
<INPUT TYPE="HIDDEN" NAME="Startyear" VALUE="2011">
<INPUT TYPE="HIDDEN" NAME="Startmonth" VALUE="04">
<INPUT TYPE="HIDDEN" NAME="Startday" VALUE="01">
<INPUT TYPE="HIDDEN" NAME="Starthour" VALUE="00">
<INPUT TYPE="HIDDEN" NAME="Startmin" VALUE="00">
<INPUT TYPE="HIDDEN" NAME="Endyear" VALUE="2011">
<INPUT TYPE="HIDDEN" NAME="Endmonth" VALUE="04">
<INPUT TYPE="HIDDEN" NAME="Endday" VALUE="02">
<INPUT TYPE="HIDDEN" NAME="Endhour" VALUE="00">
<INPUT TYPE="HIDDEN" NAME="Endmin" VALUE="00">
<INPUT TYPE="HIDDEN" NAME="Format" VALUE="3">
<INPUT TYPE="SUBMIT" NAME="Submit" VALUE="Submit">
</FORM>
```

List of response parameters:

Parameter	Value
billnumber	Unique order number in IPS Assist
ordernumber	Order number
orderstate	Order status
orderamount	Original amount of order
ordercurrency	Original currency of order
packetdate	Request issue date (GMT)
checkvalue	MD5 from the string

An example of response result in CSV format:

```
ordernumber;billnumber;orderamount;ordercurrency;orderstate;packetdate;signature;checkval
ue;2306-08;551508910014022;100.00;RUB;Approved;23.06.2011 11:59;; D6313123A5C09;
```

In XML format:

```
<?xml version='1.0' encoding='utf-8' standalone='yes'?>
<!DOCTYPE result [
<!ATTLIST result
        firstcode CDATA #REQUIRED
        secondcode CDATA #REQUIRED
        count CDATA #REQUIRED>
<!ELEMENT result (order*)>
<!ELEMENT order
(ordernumber?,billnumber?,orderamount?,ordercurrency?,orderstate?,packetdate?,checkvalue?)
>
<!ELEMENT ordernumber (#PCDATA)>
<!ELEMENT billnumber (#PCDATA)>
<!ELEMENT orderamount (#PCDATA)>
<!ELEMENT ordercurrency (#PCDATA)>
<!ELEMENT orderstate (#PCDATA)>
<!ELEMENT packetdate (#PCDATA)>
<!ELEMENT checkvalue (#PCDATA)>]>
<result firstcode='0' secondcode='0' count='1'>
<order> <ordernumber>0001-01</ordernumber>
<billnumber>511111100000001</billnumber>
<orderamount>100.00</orderamount>
<ordercurrency>RUB</ordercurrency>
<orderstate>Approved</orderstate>
<packetdate>01.01.2011 11:58</packetdate>
<signature></signature>
<checkvalue> </checkvalue>
</order></result>
```

An example of request result in XML format, returning the error (wrong password):

```
<?xml version="1.0" encoding="utf-8" standalone="yes" ?>
<!DOCTYPE result [...]>
<result firstcode="7" secondcode="102" count="0"></result>
```

For the description of the first and second codes of the automated interfaces refer to Table 5.12 of the Annex.

The WEB-service description for SOAP format can be seen on page:

https://<SERVER-NAME>/orderstate/orderstate.wsdl.

If the order payment attempt was unsuccessful (card is not authorized or timeout), then the payment repeat will create a new unique number (billnumber) in the IPS Assist for the same order number of internet-shop, which will be reflected in the response to the order status request.

An example of request result in SOAP format for the case of successful order payment at the second attempt:

```
<?xml version="1.0" encoding="UTF-8"?><soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ws="http://www.paysecure.ru/ws/"><soapenv:Body>
<ws:orderstateResponse>
  <orderstate>
    <order>
      <ordernumber>13032014_121</ordernumber>
      <billnumber>5500069208497981</billnumber>
      <orderamount>121.00</orderamount>
      <ordercurrency>RUB</ordercurrency>
      <orderstate> Declined </orderstate>
      <packetdate>13.03.2014 13:34</packetdate>
```

```
        <signature></signature>
        <checkvalue>45A33F800F2BD16C02E3D2F5C81557A0</checkvalue>
      </order>
        <ordernumber>13032014_121</ordernumber>
        <billnumber>5500069208497999</billnumber>
        <orderamount>121.00</orderamount>
        <ordercurrency>RUB</ordercurrency>
        <orderstate>Approved</orderstate>
        <packetdate>13.03.2014 13:34</packetdate>
        <signature></signature>
        <checkvalue>671768C59429DE5A9C5BBD1E7F573666</checkvalue>
      </order>
    </orderstate>
  </ws:orderstateResponse>
</soapenv:Body></soapenv:Envelope>
```

3.4. Receiving operations results by order number

If the enterprise requires not only the information about the order status (approved, cancelled, payment confirmation in process), but also a detailed information about the operations (payment, payment approval, return or cancellation) executed with regards to this order, the enterprise can use Web service to receive the results of the operations under a given order number.

To receive the payment result by order number, send a request to IPS Assist server via HTTP POST or SOAP method (in UTF-8 coding).

The request URL for receiving the payment result with a list of operations within the order:

https://<SERVER-NAME>/orderresult/orderresult.cfm.

The order search using Web service can be performed only for the specified time period. The default sampling end date is taken to be the current date, while the default sampling start date is the current date, minus three days.

List of request parameters

Parameter	Mandatory field	Adopted values	Default value	Description
Ordernumber	Yes	String, 128 characters		Order number
Merchant_ID	Yes	Number		The enterprise identifier in IPS Assist
Login	Yes	8 - 20 characters		Login (Latin letters, digits and symbol _)
Password	Yes	8 - 20 characters		Password (Latin letters and digits)
StartYear	No	Year in "2011" format	Minus three days from the current date	Sampling start date (GMT)
StartMonth	No	1-12	Minus three days from the current date	
StartDay	No	1-31	Minus three days from the current date	
StartHour	No	0-23	Minus three days from the current date	
StartMin	No	0-59	Minus three days from the current date	
EndYear	No	Year in "2011"	Current year	Sampling end date (GMT)

Parameter	Mandatory field	Adopted values	Default value	Description
		format		
EndMonth	No	1-12	Current month	
EndDay	No	1-31	Current day	
EndHour	No	0-23	Current hour	
EndMin	No	0-59	Current minute	
Language	No	RU EN	EN	Language of the results output
Format	Yes/No	3 – XML 4 - SOAP	4	Format of the results output. It is not mandatory in case of SOAP request format and mandatory for POST

Note. All request parameters are automatically validated. The validation rules are given in the Table 5.15 of the Annex.

Request example for HTTP POST format:

```
<FORM ACTION="https://<SERVER-NAME>/orderresult/orderresult.cfm"
METHOD="POST">
<INPUT TYPE="HIDDEN" NAME="Ordernumber" VALUE="1001-01">
<INPUT TYPE="HIDDEN" NAME="Merchant_ID" VALUE="Your Merchant_ID">
<INPUT TYPE="HIDDEN" NAME="Login" VALUE="Your login">
<INPUT TYPE="HIDDEN" NAME="Password" VALUE="Your password">
<INPUT TYPE="HIDDEN" NAME="Startyear" VALUE="2011">
<INPUT TYPE="HIDDEN" NAME="Startmonth" VALUE="04">
<INPUT TYPE="HIDDEN" NAME="Startday" VALUE="01">
<INPUT TYPE="HIDDEN" NAME="Starthour" VALUE="00">
<INPUT TYPE="HIDDEN" NAME="Startmin" VALUE="00">
<INPUT TYPE="HIDDEN" NAME="Endyear" VALUE="2011">
<INPUT TYPE="HIDDEN" NAME="Endmonth" VALUE="04">
<INPUT TYPE="HIDDEN" NAME="Endday" VALUE="02">
<INPUT TYPE="HIDDEN" NAME="Endhour" VALUE="00">
<INPUT TYPE="HIDDEN" NAME="Endmin" VALUE="00">
<INPUT TYPE="HIDDEN" NAME="Format" VALUE="3">
<INPUT TYPE="HIDDEN" NAME="Language" VALUE="EN">
<INPUT TYPE="SUBMIT" NAME="Submit" VALUE="Execute">
</FORM>
```

List of response parameters:

Parameter	Value
Order parameters	
billnumber	Unique order number in IPS Assist
ordernumber	Order number
testmode	Test mode
ordercomment	Comment
orderamount	Original amount of order
ordercurrency	Original currency of order
firstname	Payer's first name
lastname	Payer's last name
middlename	Payer's middle name
Email	Payer's e-mail

Parameter	Value
orderdate	Date of order
orderstate	Order status
packetdate	Request issue date
signature	Signature
checkvalue	uppercase(md5(uppercase(md5(SALT) + md5(X)))), where SALT – secret word; X – result of the following parameters string concatenation: merchant_id, ordernumber, orderamount, ordercurrency, orderstate (without delimiters), + means string concatenation.
Operation parameters	
billnumber	Extended format of Billnumber
operationtype	Operation type
operationstate	Operation status
amount	Operation amount
currency	Currency of operation
ipaddress	Payer's IP-address
clientip	Transactor's IP-address
meantype_id	Type of payment means
meansubtype	Payment means subtype
meannumber	Number of payment means
cardholder	Payment means holder
cardexpirationdate	Card expired date
issuebank	Name of issue bank
bankcountry	Country of issue bank
responsecode	Response code
message	Operation result message
customermessage	Result message for a customer
recommendation	Recommendation
approvalcode	Authorization code
protocolname	Protocol
processingname	Processing
operationdate	Operation date and time (GMT)
authresult	3Ds authorization result (Y – success, N - fail, A - Attempt, U – unknown)
authrequired	The card involvement in 3Ds check result (1 – involved, 0 – not involved, -1 – unknown, null – error appear during involvement check)
slipno	Financial transaction identifier
chequeItems*	The string with the cheque items in the JSON format according to the document "Payment with cheque".
3DSecure parameters	
version	3DSecure protocol version
alphaauthresult	3Ds authorization result (Y – success, N - fail, A - Attempt, U – unable to authenticate, R – rejection, C –not completed for any reason,)

Parameter	Value
challenge	Interaction with the cardholder (C – yes, F – no)
eci	Electronic Commerce Indicator (5 – full authentication, 6 – authentication attempt, 7 – without authentication)

*Order items are sent only if the "*Send order positions*" option is enabled in the Personal Account of IPS Assist.

Attention! Please, note that several operations can be created within one order (payment, payment confirmation, cancellation). Furthermore, there can be several payment operations within one order, if some of them were unsuccessful. The order can have the only one successful payment operation. Thus there can be several enclosed operations within one order number in the response to a request for the operations results.

Attention! The *testmode* value of response has to be checked. If the payment was made in test mode (*testmode* = 1), then the shipment of goods or providing of services for the current request is not required.

An example of a request result in XML format:

```
<?xml version='1.0' encoding='utf-8' standalone='yes'?>
<!DOCTYPE result [
<!ATTLIST result
        firstcode CDATA #REQUIRED
        secondcode CDATA #REQUIRED
        count CDATA #REQUIRED>
<!ELEMENT result (order*)>
<!ELEMENT order
(ordernumber?,billnumber?,testmode?,ordercomment?,orderamount?,ordercurrency?,firstname?
,lastname?,middlename?,email?,orderdate?,orderstate?,packetdate?,signature?,checkvalue?,ope
ration*)>
<!ELEMENT ordernumber (#PCDATA)>
<!ELEMENT billnumber (#PCDATA)>
<!ELEMENT testmode (#PCDATA)>
<!ELEMENT ordercomment (#PCDATA)>
<!ELEMENT orderamount (#PCDATA)>
<!ELEMENT ordercurrency (#PCDATA)>
<!ELEMENT firstname (#PCDATA)>
<!ELEMENT lastname (#PCDATA)>
<!ELEMENT middlename (#PCDATA)>
<!ELEMENT email (#PCDATA)>
<!ELEMENT orderdate (#PCDATA)>
<!ELEMENT orderstate (#PCDATA)>
<!ELEMENT packetdate (#PCDATA)>
<!ELEMENT signature (#PCDATA)>
<!ELEMENT checkvalue (#PCDATA)>
<!ELEMENT operation
(billnumber?,operationtype?,operationstate?,amount?,currency?,clientip?,ipaddress?,meantype_i
d?,meantypename?,meansubtype?,meannumber?,cardholder?,cardexpirationdate?,issuebank?,b
ankcountry?,responsecode?,message?,customermessage?,recommendation?,approvalcode?,prot
ocoltypename?,processingname?,operationdate?,authresult?,authrequired?,slipno?)>
<!ELEMENT operationtype (#PCDATA)>
<!ELEMENT operationstate (#PCDATA)>
<!ELEMENT amount (#PCDATA)>
<!ELEMENT currency (#PCDATA)>
<!ELEMENT clientip (#PCDATA)>
<!ELEMENT ipaddress (#PCDATA)>
<!ELEMENT meantype_id (#PCDATA)>
<!ELEMENT meantypename (#PCDATA)>
```

```
<!ELEMENT meansubtype (#PCDATA)>
<!ELEMENT meannumber (#PCDATA)>
<!ELEMENT cardholder (#PCDATA)>
<!ELEMENT cardexpirationdate (#PCDATA)>
<!ELEMENT issuebank (#PCDATA)>
<!ELEMENT bankcountry (#PCDATA)>
<!ELEMENT responsecode (#PCDATA)>
<!ELEMENT message (#PCDATA)>
<!ELEMENT customermessage (#PCDATA)>
<!ELEMENT recommendation (#PCDATA)>
<!ELEMENT approvalcode (#PCDATA)>
<!ELEMENT protocoltypename (#PCDATA)>
<!ELEMENT processingname (#PCDATA)>
<!ELEMENT operationdate (#PCDATA)>
<!ELEMENT authresult (#PCDATA)>
<!ELEMENT authrequired (#PCDATA)>
<!ELEMENT slipno (#PCDATA)>]>
<result firstcode='0' secondcode='0' count='1'>
<order>
<ordernumber>0001-01</ordernumber>
<billnumber>511111100000001</billnumber>
<testmode>1</testmode>
<ordercomment>test payment</ordercomment>
<orderamount>100.00</orderamount>
<ordercurrency>RUB</ordercurrency>
<firstname>Test</firstname>
<lastname>Testov</lastname>
<middlename>Testovich</middlename>
<email>test@testpost.ru</email>
<orderdate>01.01.2011 11:23:13</orderdate>
<orderstate>Approved</orderstate>
<packetdate>01.01.2011 12:05</packetdate>
<signature></signature>
<checkvalue> </checkvalue>
<operation>
  <billnumber>511111100000001.1</billnumber>
  <operationtype>100</operationtype>
  <operationstate>Success</operationstate>
  <amount>100.00</amount>
  <currency>RUB</currency>
  <clientip>111.23.11.23</clientip>
  <ipaddress>0.0.0.0</ipaddress>
  <meantype_id>1</meantype_id>
  <meantypename>VISA</meantypename>
  <meansubtype>Classic</meansubtype>
  <meannumber>411111****1111</meannumber>
  <cardholder>TEST</cardholder>
  <cardexpirationdate>12/20</cardexpirationdate>
  <issuebank>New Bank</issuebank>
  <bankcountry>Russia</bankcountry>
  <responsecode>AS000</responsecode>
  <message> </message>
  <customermessage> </customermessage>
  <recommendation></recommendation>
  <approvalcode>F41412</approvalcode>
  <protocoltypename>NET</protocoltypename>
  <processingname>Name</processingname>
  <operationdate>01.01.2011 11:24:13</ operationdate>
  <authresult>Y</authresult>
  <authrequired>1</authrequired>
  <slipno>111111</slipno></operation>
  <threedsdata>
    <version>1.0.0</version>
    <alphaauthresult>Y</alphaauthresult>
    <challenge>C</challenge>
```

```
    <eci>5</eci>
  </threedsdata>
</operation>
<operation>
  <billnumber>511111100000001.2</billnumber>
  <operationtype>200</operationtype>
  <operationstate>Success</operationstate>
  <amount>100.00</amount>
  <currency>RUB</currency>
  <clientip>111.23.11.23</clientip>
  <ipaddress>0.0.0.0</ipaddress>
  <meantype_id>1</meantype_id>
  <meantypename>VISA</meantypename>
  <meansubtype>Classic</meansubtype>
  <meannumber>411111****1111</meannumber>
  <cardholder>TEST</cardholder>
  <cardexpirationdate>12/20</cardexpirationdate>
  <issuebank>New Bank</issuebank>
  <bankcountry>Russia</bankcountry>
  <responsecode>AS000</responsecode>
  <message> </message>
  <customermessage> </customermessage>
  <recommendation></recommendation>
  <approvalcode></approvalcode>
  <protocoltypename></protocoltypename>
  <processingname>Name</processingname>
  <operationdate>01.02.2011 19:24:13</operationdate>
  <authresult></authresult>
  <authrequired></authrequired>
  <slipno>111111</slipno></operation>
</operation> </order> </result>
```

An example of request result in XML format, returning the error (wrong password):

```
<?xml version="1.0" encoding="utf-8" standalone="yes" ?>
<!DOCTYPE result [...]>
<result firstcode="7" secondcode="102" count="0"></result>
```

For the description of the first and second codes of the automated interfaces refer to Table 5.12 of the Annex. Tables 5.1, 5.2, 5.4, 5.8 also include the descriptions of possible order statuses, types of operations, response codes and currency codes, respectively. The first 6 digits and the last 4 digits of the card number are returned as the field <meannumber> value; the other digits are hidden under symbol *.

The WEB-service description for SOAP format can be seen on page:

https://<SERVER-NAME>/orderresult/orderresult.wsdl.

If the order payment attempt was unsuccessful (card is not authorized or timeout), then the payment repeat will create a new unique number (billnumber) in the IPS Assist for the same order number of internet-shop, which will be reflected in the response to the order status request. In this case, the response to the request contains all the operations performed under this order number with all relevant unique billnumbers of IPS Assist in order of implementation of them.

Note. The field <slipno> is used only for processings: UCS, Raiffeisenbank, Multicard and Russian Standard. The values of this parameter in result requests are described in the Table 5.14 of the Annex.

An example of request result in SOAP format for the case of successful payment order at the second attempt, the first attempt was closed due to a timeout, and the second (successful) consists of two operations:

```xml
<?xml version="1.0" encoding="UTF-8"?><soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ws="http://www.paysecure.ru/ws/"><soapenv:Body>
<ws:orderresultResponse><orderresult>
  <order>
    <ordernumber>13032014_122</ordernumber>
    <billnumber>5500069208498005</billnumber>
    <testmode>1</testmode>
    <ordercomment>тестовый платеж</ordercomment>
    <orderamount>331.39</orderamount>
    <ordercurrency>RUB</ordercurrency>
    <firstname>Test</firstname>
    <lastname>Testov</lastname>
    <middlename>T.</middlename>
    <email>test@test.ru</email>
    <orderdate>13.03.2014 13:38:24</orderdate>
    <orderstate>Timeout</orderstate>
    <packetdate>13.03.2014 14:55</packetdate>
    <signature></signature>
    <checkvalue>863F176DC699131758B2230EA93BC911</checkvalue>
  </order>
  <order>
    <ordernumber>13032014_122</ordernumber>
    <billnumber>5500069208498070</billnumber>
    <testmode>1</testmode>
    <ordercomment>тестовый платеж</ordercomment>
    <orderamount>331.39</orderamount>
    <ordercurrency>RUB</ordercurrency>
    <firstname>Test</firstname>
    <lastname>Testov</lastname>
    <middlename>T.</middlename>
    <email>test@test.ru</email>
    <orderdate>13.03.2014 14:52:09</orderdate>
    <orderstate>Approved</orderstate>
    <packetdate>13.03.2014 14:55</packetdate>
    <signature></signature>
    <checkvalue>E458CD73F1AA3F994F4D97C40613FD0A</checkvalue>
    <operation>
      <billnumber>5500069208498070.1</billnumber>
      <operationtype>100</operationtype>
      <operationstate>Success</operationstate>
      <amount>331.39</amount>
      <currency>RUB</currency>
      <clientip>10.10.10.10</clientip>
      <ipaddress>0.0.0.0</ipaddress>
      <meantype_id>1</meantype_id>
      <meantypename>VISA</meantypename>
      <meansubtype>Busines</meansubtype>
      <meannumber>462710****4724</meannumber>
      <cardholder>TEST</cardholder>
      <cardexpirationdate>12/20</cardexpirationdate>
      <issuebank>Bank</issuebank>
      <bankcountry>RUS</bankcountry>
      <responsecode>AS000</responsecode>
      <message> </message>
      <customermessage> </customermessage>
      <recommendation></recommendation>
      <approvalcode>X53576</approvalcode>
      <protocoltypename>NET</protocoltypename>
      <processingname>Fake</processingname>
```

```xml
            <operationdate>13.03.2014 14:52:10</operationdate>
            <authresult></authresult>
            <authrequired>0</authrequired>
            <slipno>111111</slipno>
            <chequeitems>
              {"items":[{"id":1,"price":"20.00","quantity":"3","amount":"60.00","tax":"vat10",
              "product":"Sugar","name":"Sugar","fpmode":"1"},{"id":2,"price":"20.11","quantity":
              "3.55","amount":"71.39","tax":"vat20","product":"Milk","name":"Milk",
              "fpmode":"1"},{"id":3,"price":"200.00","quantity":"1","amount":"200.00",
              "tax":"novat","product":"Butter","name":"Butter","fpmode":"3"}]}
            </chequeitems>
            <threedsdata>
               <version>1.0.0</version>
               <alphaauthresult>C</alphaauthresult>
               <challenge>C</challenge>
               <eci></eci>
            </threedsdata>
        </operation>
        <operation>
           <billnumber>5500069208498070.2</billnumber>
           <operationtype>200</operationtype>
           <operationstate>Success</operationstate>
           <amount>331.39</amount>
           <currency>RUB</currency>
           <clientip>10.10.10.10</clientip>
           <ipaddress>0.0.0.0</ipaddress>
           <meantype_id>1</meantype_id>
           <meantypename>VISA</meantypename>
           <meansubtype>Busines</meansubtype>
           <meannumber>462710****4724</meannumber>
           <cardholder>TEST</cardholder>
           <cardexpirationdate>12/20</cardexpirationdate>
           <issuebank>Bank</issuebank>
           <bankcountry>RUS</bankcountry>
           <responsecode>AS000</responsecode>
           <message> </message>
           <customermessage> </customermessage>
           <recommendation></recommendation>
           <approvalcode></approvalcode>
           <protocoltypename></protocoltypename>
           <processingname>Fake</processingname>
           <operationdate>13.03.2014 14:53:37</operationdate>
           <authresult></authresult>
           <authrequired>0</authrequired>
           <slipno>111111</slipno>
           <chequeitems>
             {"items":[{"id":1,"price":"20.00","quantity":"3","amount":"60.00","tax":"vat10",
             "product":"Sugar","name":"Sugar","fpmode":"1"},{"id":2,"price":"20.11","quantity":
             "3.55","amount":"71.39","tax":"vat20","product":"Milk","name":"Milk",
             "fpmode":"1"},{"id":3,"price":"200.00","quantity":"1","amount":"200.00",
             "tax":"novat","product":"Butter","name":"Butter","fpmode":"3"}]}
           </chequeitems>
           <threedsdata>
              <version>1.0.0</version>
              <alphaauthresult>Y</alphaauthresult>
              <challenge>C</challenge>
              <eci>5</eci>
           </threedsdata>
        </operation>
     </order>
</orderresult></ws:orderresultResponse></soapenv:Body></soapenv:Envelope>
```

3.5. Sending the results of an authorization to the enterprise server

To notify the enterprise about payment results in real-time the IPS Assist provides the service for synchronous sending the results of the payment to the enterprise server. After completion of the buyer payment (by bankcard or by e-cash) the message is being sent to the enterprise server via HTTP POST method with parameters of the payment.

You can configure result sending in the personal Account, specifying the URL for the results sending, the protocol type, the type of signature and the secret word.

After you configure and activate the service the results of payments by bankcards and electronic cash will be sent to the enterprise server. The results of payment confirmation, refunds and cancellations are not sent. Also the result of a payment which is closed by timeout is not sent.

Attention! For security reasons results are sent only on ports 443, 8443, 80, 8080. No other ports can be used to receive the results!

To use the service through HTTPS a certificate from the trusted certification authority must be used, or support (support@assist.ru) should be contacted to obtain a personal certificate.

The list of the sent parameters:

Parameter	Value
merchant_id	The enterprise identifier in IPS Assist
ordernumber	Order number
billnumber	Unique order number in IPS Assist
testmode	Test mode
ordercomment	Comment
orderamount	Original amount of order
ordercurrency	Original currency of order
amount	Order amount
currency	Order currency
rate	Currency rate
firstname	Payer's first name
lastname	Payer's last name
middlename	Payer's middle name
email	Payer's e-mail
clientip	Customer IP-address
ipaddress	Payer's IP-address
meantype_id	Payment means ID
meantypename	Type of payment means
meansubtype	Subtype of payment means
meannumber	Number of payment means
cardholder	Payment means holder
cardexpirationdate	Card expired date

Parameter	Value
issuebank	Issuing bank name
bankcountry	Country of issuing bank
orderdate	Date of order(GMT)
orderstate	Order status
responsecode	Response code
message	Message
customermessage	Result message for customer
recommendation	Recommendation
approvalcode	Authorization code
protocoltypename	Protocol
processingname	Processing name
operationtype	Operation type
operationdate	Operation date and time(GMT)
authresult	3Ds authorization result (Y – success, N - fail, A - Attempt, U – unknown)
authrequired	The card involvement in 3Ds check result (1 – involved, 0 – not involved, -1 – unknown, null – error appear during involvement check)
packetdate	Request date (GMT)
signature	1) For signature type MD5 - empty 2) For PGP type – an X value, signed by IPS Assist secret key and converted into BASE64 string. X value – is string concatenation of merchant_id, ordernumber, amount, currency, orderstate string representations (without delimiters).
checkvalue	Request validation code 1) For signature type MD5 – calculated as: uppercase(md5(uppercase(md5(SALT) + md5(X)))), where SALT – the secret word; X – the same as the X value in the signature field description; + - string concatenation operator 2) For PGP type – empty
slipno	Financial transaction identifier
payment_Id*	External operation ID
fiscalreceipt_Id*	Cheque ID
status*	Cheque status
fiscal_receipt_number*	Cheque number in the shift
shift_number*	Shift number
receipt_datetime*	Date and time of the document from FS
total*	The total amount of the document
fn_number	FS number
ecr_registration_number*	CR registration number
fiscal_document_number*	Fiscal number of the document
fiscal_document_attribute*	Fiscal document attribute
errortext*	Error text
taxationsystem*	Code of the taxation system
chequeItems**	The string with the cheque items in the JSON format according to the document "Payment with cheque".

Parameter	Value
3DSecure parameters	
version	3DSecure protocol version
alphaauthresult	3Ds authorization result (Y – success, N - fail, A - Attempt, U – unable to authenticate, R – rejection, C –not completed for any reason,)
challenge	Interaction with the cardholder (C – yes, F – no)
eci	Electronic Commerce Indicator (5 – full authentication, 6 – authentication attempt, 7 – without authentication)

* Fiscalization parameters are sent only when the "*Send fiscal results*" option is enabled in the Personal Account of IPS Assist.

** Order items are sent only if the "*Send order positions*" option is enabled in the Personal Account of IPS Assist.

The IPS Assist waits for the XML packet from the enterprise system as replay on the payment result message.

In case of the successful receiving and processing message the format of the replay packet should be:

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
 <SOAP-ENV:Body>
 <m:PushPaymentResultResponse xmlns:m="http://www.assist.ru/wsdl">
 <return xmlns:si="http://www.assist.ru/type/" xsi:type="si:SOAPStruct">
   <billnumber>5696145241469255.1</billnumber>
   <packetdate>26.06.2019 08:44:00</packetdate>
 </return>
 </m:PushPaymentResultResponse>
 </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

In case of failure:

```
<?xml version="1.0" encoding="windows-1251"?>
  <SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" SOAP-
ENV:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <SOAP-ENV:Body SOAP-
ENV:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
        <SOAP-ENV:Fault>
          <faultcode>5</faultcode>
          <faultstring>143</faultstring>
          <detail />
        </SOAP-ENV:Fault>
      </SOAP-ENV:Body>
    </SOAP-ENV:Envelope>
```

For the description of the first and second codes of the automated interfaces refer to Table 5.12 of the Annex.

If there is no answer from the enterprise (either about success or about failure in the message handling) the system repeats the message sending with increasing intervals during the four hours but not more than 8 times.

Attention! When the received replay indicates a failure in message handling the sending of payment results is not repeated. Values of firstcode, secondcode are used for used to diagnose the problems.

Attention! The *testmode* value of response has to be checked. If the payment was made in test mode (*testmode* = 1), then the shipment of goods or providing of services for the current request is not required.

An example of request result in SOAP format:

```xml
<?xml version="1.0" encoding="utf-8"?><soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ws="http://www.paysecure.ru/ws/"><soapenv:Body>
<ws:PushPaymentResult>
<merchant_id>500001</merchant_id>
<ordernumber>18062012_SDR</ordernumber>
<billnumber>550000110000001.1</billnumber>
<testmode>1</testmode>
 <ordercomment>тестовый платеж</ordercomment>
 <orderamount>21.00</orderamount>
 <ordercurrency>RUB</ordercurrency>
 <amount>21.00</amount>
 <currency>RUB</currency>
 <rate>1</rate>
 <firstname>Test</firstname>
 <lastname>Testov</lastname>
 <middlename>T.</middlename>
 <email>test@test.ru</email>
 <clientip>10.10.10.10</clientip>
 <ipaddress>0.0.0.0</ipaddress>
 <meantype_id>2</meantype_id>
 <meantypename>MasterCard</meantypename>
 <meansubtype>Standart</meansubtype>
 <meannumber>546792****4128</meannumber>
 <cardholder>TEST</cardholder>
 <cardexpirationdate>12/20</cardexpirationdate>
 <issuebank>Bank</issuebank>
 <bankcountry>RUS</bankcountry>
 <orderdate>18.06.2012 11:10:06</orderdate>
 <orderstate>Approved</orderstate>
 <responsecode>AS000</responsecode>
 <message />
 <customermessage>Завершено успешно.</customermessage>
 <recommendation>SUCCESSFUL AUTHORIZATION</recommendation>
 <approvalcode>X40334</approvalcode>
 <protocoltypename>NET</protocoltypename>
 <processingname>Fake</processingname>
 <operationtype>100</operationtype>
 <operationdate>18.06.2012 11:10:07</operationdate>
 <authresult />
 <authrequired>0</authrequired>
 <packetdate>18.06.2012 11:11:02</packetdate>
 <signature />
 <checkvalue>45A33F800F2BD16C02E3D2F5C81557A0</checkvalue>
 <threedsdata>
   <version>1.0.0</version>
   <alphaauthresult>Y</alphaauthresult>
   <challenge>C</challenge>
   <eci>5</eci>
 </threedsdata>
 </ws: PushPaymentResul></soapenv:Body></soapenv:Envelope>
```

The field <slipno> is used only for processings: UCS, Raiffeisenbank, Multicard and Russian Standard. The values of this parameter in result requests are described in the Table 5.14 of the Annex.

4. Web services

IPS Assist provides enterprises with the following services: payment cancellation and cash return, payment confirmation transaction (see the description in section 2.3.2), receiving information about the transactions performed via the server request.

Attention! The following root certificate has to be installed on the requester side in the Trusted Root Certification Authorities Store for correct work with WEB-services via secure communication over TLS:

- root certificate GlobalSign: GlobalSign Root CA R1
  (https://www.globalsign.com/repository/ca-certificates/).

Before to start, check the presence of this certificate in the trust store and add tit if necessary.

4.1. Payment cancellation and cash return

When the enterprise fail to deliver a product or a service paid for by bankcard to a customer, or a customer cancel the order, it is possible to cancel the authorization by bankcard later (completely or partially). Payment can be cancelled/refunded via Personal account of the enterprise in IPS Assist, or using Web service.

IPS Assist supports the following types of returns and cancellations:

Authorization return (on-line cancellation) – procedure for the cancellation of authorization by bankcard before financial transaction is created. Usually the authorization can be cancelled within the same day when the payment is performed. The authorization can be cancelled later than within one day, if the enterprise has an agreement with IPS Assist on the postponed financial confirmation, or if the enterprise uses the double-stage operation mode and the payment financial confirmation has not been made yet. In any case, the authorization cannot be canceled later than within the time period specified by the processing center.

Partial cancellation is admissible for processings with applicable setting (in particular, UCS, Multicard), before the financial transaction is performed. If a partial cancellation is performed after the successful authorization, the financial transaction will be made for the remaining amount of the payment. Partial cancellation for enterprising operating based on the double-stage mode is possible only after financial confirmation (before the financial transaction is sent), and is similar from financial point of view to the payment confirmation.

Refund is a procedure for full or partial cash return to a customer for the payment performed in the enterprise's Internet-shop using bankcard. Refund operation can be performed after the financial transaction has been made.

Refund operation applies for any types of return on JCB and AMEX cards. Refund is applied to any returns of a partial amount.

Refund operation can also be applied to returns of a full amount, if only such type of cash return operations is admissible for the processing.

Refund operation is performed for a full amount for UCS and Raiffeisenbank processings by VISA and MasterCard cards, if the reason of cancellation is the card holder declining (parameter CancelReason=2).

Financial transaction cancellation is the payment (by a bankcard) operation cancellation that was authorized and after the financial transaction had been performed. The operation of financial transaction cancellation implies a full refund, taking into account the possible performs of the currency differences on the date of payment and on date of financial transaction cancellation.

A financial transaction can be canceled only for a full amount of payment and only for UCS and Raiffeisenbank processings by VISA and MasterCard cards, if the cancellation is caused by the shop declining of the operation (parameter CancelReason=1), or if the payment operation is fraud (parameter CancelReason=3).

Note. Some processings (UCS, in particular) establish special financial conditions for the financial transaction cancellation operation.

The financial transaction cancellation period for Raiffeisenbank processing is limited to 39 days (after 39 days a refund can be made).

The procedures for cancellation and refund in Personal account are described in Personal account operation instructions.

You can also make a cancellation or refund using Web service. For this, send HTTP POST or SOAP request (in UTF-8 coding) to IPS Assist server to the following address:

URL for HTTP POST: https://<SERVER-NAME>/cancel/cancel.cfm.

URL for SOAP: https://<SERVER-NAME>/cancel/wscancel.cfm

The result of wscancel service can contain several operations when the request causes performance of several cancel operation.

When you return the money on the e-wallet, the refund amount shouldn't exceed the current day balance of the merchant on the corresponding e-wallet (the total amount of successful payments minus the commission of the bank, minus the total amount of successful returns). Partial cancellations on e-wallets are prohibited during the calendar day (according to the time zone of Moscow).

Performing WebMoney payment cancellations via web-service have additional feature: system replay contain the operation status «*In Process*» (responsecode=AS300). It is related to the delay of the status return from the WebMoney payment system. To receive the real status you

should perform an additional request for the order operations statuses in a few minutes later the cancel request.

When several cancels are performed on the order then several cancel operations (type 300: cancel) will be returned with the request result. They will have different parameter *billnumber* (in extended format: 5700027202722028.3 – for example).

All cancellations (partial and full) on QIWI are prohibited during the calendar day (according to the time zone of Moscow).

Performing cancellations on QIWI payment via web-service have additional feature: system usually replay with successful operation status but (in some cases) it can replay with status «*In Process*» (responsecode=AS300). It is related to the delay of the status return from the QIWI payment system. To receive the real status you should perform an additional request for the order operations statuses in a few minutes later the cancel request. When several cancels are performed on the order then several cancel operations (type 300: cancel) will be returned with the request result. They will have different parameter *billnumber* (in extended format: 5700027202722028.3 – for example).

List of request parameters:

Parameter	Mandatory field	Adopted values	Default value	Description
Billnumber	Yes	15 or 16 digits; extended format		Unique number of payment corresponding to the order number in IPS Assist; extended payment number can be passed
Merchant_ID	Yes	Number		The enterprise identifier in IPS Assist
Login	Yes	8-20 character string		Login (Latin letters, digits and symbol _)
Password	Yes	8-20 character string		Password (Latin letters and digits)
Amount	No*	Number, 15 digits (with '.' delimiter)	Authorization amount	Refund amount
Currency	No*	3 characters	Authorization currency code	Cancellation and refund currency code. Only the authorization currency code can be used
CancelReason	No	1 – Declined by shop 2 – Declined by customer 3 – Fraud operation	1	Reason of cancellation or refund
Language	No	RU – Russian EN – English	RU	Language of the results output
ClientIP	No			IP-address of the operator performing the cancellation/refund
Format	No	1 – CSV 2 – WDDX 3 – XML 4 – SOAP	Format of input data	Format of the results output

* The parameters ***Amount*** and ***Currency*** can be available or missing in the request only simultaneously. If the above parameters are missing, the full amount cancelation operation will be performed.

Note. All request parameters are automatically validated. The validation rules are given in the Table 5.15 of the Annex.

The parameter billnumber can be passed either in ordinary format (when there was only one successful payment on this order) or in extended format in the confirmation. While using the extended format it is required to provide the exact number of the successful authorization operation (in some cases it can be not a first operation in the order, 5111111000965142.2 for example).

Cancel or refund is successful when the returned response code of cancel operation is AS000 (operation completed successfully), both codes *firstcode* and *secondcode* are equal to 0, status of the order is **Canceled** or **PartialCanceled**.

Unsuccessful cancel operation has the returned response code set to values AS100-AS998. If a request for a refund or cancel can not be processed then the query will return non-zero values in *firstcode* and *secondcode.*

Type of transaction (on-line cancellation, refund, financial transaction cancellation, partial cancellation) will be determined by IPS Assist automatically depending on the amount (full or partial cancellation), processing, type of card, availability of a financial transaction for parental authorization, and refund reason.

Interface for HTTP POST - format (cancel)

An example of HTTP POST request for the payment cancellation by bankcard:

```
<FORM ACTION="https://<SERVER-NAME>/cancel/cancel.cfm" method="POST">
<INPUT TYPE="hidden" NAME="BillNumber" VALUE="511111100000001">
<INPUT TYPE="hidden" NAME="Merchant_ID" VALUE="Your Merchant_ID">
<INPUT TYPE="hidden" NAME="Login" VALUE="Your login ">
<INPUT TYPE="hidden" NAME="Password" VALUE="Your password">
<INPUT TYPE="hidden" NAME="Amount" VALUE="amount">
<INPUT TYPE="hidden" NAME="Currency" VALUE="Currency">
<INPUT TYPE="hidden" NAME="ClientIP" VALUE="IP-address">
<INPUT TYPE="hidden" NAME="Language" VALUE="Language of result output">
<INPUT TYPE="hidden" NAME="Format" VALUE="Result output format">
<INPUT TYPE="Submit"></FORM>
```

List of response parameters:

Parameter	Value
ordernumber	Order number
responsecode	Response code
recommendation	Recommendations
message	Message
ordercomment	Comment
orderdate	Date of order
amount	Operation amount
currency	Currency of operation
meantypename	Type of payment means
meannumber	Number of payment means
lastname	Payer's last name
firstname	Payer's first name
middlename	Payer's middle name
issuebank	Name of issue bank
Email	Payer's e-mail
bankcountry	Country of issue bank
rate	Currency rate
approvalcode	Authorization code
meansubtype	Payment means subtype
cardholder	Payment means holder
cardexpirationdate	Card expired date
ipaddress	Payer's IP-address
protocolname	Protocol
testmode	Test mode
customermessage	Result message for a customer
orderstate	Order status
processingname	Processing
operationtype	Operation type
billnumber	Extended format of Billnumber
orderamount	Original amount of operation
ordercurrency	Original currency of operation
slipno	Financial transaction identifier
packetdate	Request issue date
signature	Signature

An example of request result of payment cancellation or refund in XML format

```
<?xml version='1.0' encoding='utf-8' standalone='yes'?>
<!DOCTYPE result [
<!ATTLIST result
        firstcode CDATA #REQUIRED
        secondcode CDATA #REQUIRED
        count CDATA #REQUIRED>
<!ELEMENT result (orders?)>
<!ELEMENT orders (order)>
<!ELEMENT order (ordernumber?, responsecode?, recommendation?, message?,
ordercomment?, orderdate?, amount?, currency?, meantypename?, meannumber?, lastname?,
firstname?, middlename?, issuebank?, email?, bankcountry?, rate?, approvalcode?,
meansubtype?, cardholder?, cardexpirationdate?, ipaddress?, protocoltypename?, testmode?,
customermessage?,  orderstate?, processingname?, operationtype?, billnumber?, orderamount?,
ordercurrency?, slipno?, packetdate?, signature?, pareq?, acsurl?)>
<!ELEMENT ordernumber (#PCDATA)>
<!ELEMENT responsecode (#PCDATA)>
<!ELEMENT recommendation (#PCDATA)>
<!ELEMENT message (#PCDATA)>
<!ELEMENT ordercomment (#PCDATA)>
<!ELEMENT orderdate (#PCDATA)>
<!ELEMENT amount (#PCDATA)>
<!ELEMENT currency (#PCDATA)>
<!ELEMENT meantypename (#PCDATA)>
<!ELEMENT meannumber (#PCDATA)>
<!ELEMENT lastname (#PCDATA)>
<!ELEMENT firstname (#PCDATA)>
<!ELEMENT middlename (#PCDATA)>
<!ELEMENT issuebank (#PCDATA)>
<!ELEMENT email (#PCDATA)>
<!ELEMENT bankcountry (#PCDATA)>
<!ELEMENT rate (#PCDATA)>
<!ELEMENT approvalcode (#PCDATA)>
<!ELEMENT meansubtype (#PCDATA)>
<!ELEMENT cardholder (#PCDATA)>
<!ELEMENT cardexpirationdate (#PCDATA)>
<!ELEMENT ipaddress (#PCDATA)>
<!ELEMENT protocoltypename (#PCDATA)>
<!ELEMENT testmode (#PCDATA)>
<!ELEMENT customermessage (#PCDATA)>
<!ELEMENT orderstate (#PCDATA)>
<!ELEMENT processingname (#PCDATA)>
<!ELEMENT operationtype (#PCDATA)>
<!ELEMENT billnumber (#PCDATA)>
<!ELEMENT orderamount (#PCDATA)>
<!ELEMENT ordercurrency (#PCDATA)>
<!ELEMENT slipno (#PCDATA)>
<!ELEMENT packetdate (#PCDATA)>
<!ELEMENT signature (#PCDATA)>
<!ELEMENT pareq (#PCDATA)>
<!ELEMENT acsurl (#PCDATA)>]>
 <result firstcode="0" secondcode="0" count="1">
<orders> <order>
<ordernumber> 0001-01 </ordernumber>
<responsecode> AS000 </responsecode>
<recommendation></recommendation>
<message> Completed. </message>
<ordercomment>test payment</ordercomment>
<orderdate> 01.01.2011 10:51:53 </orderdate>
<amount> 100.00 </amount>
<currency> RUB </currency>
<meantypename>VISA</meantypename>
<meannumber>411111****1111</meannumber>
<lastname> Testov </lastname>
```

```
<firstname> Test </firstname>
<middlename> Testovich </middlename>
<issuebank> BANK </issuebank>
<email> test@testpost.ru </email>
<bankcountry> Russia </bankcountry>
<rate>1</rate>
<approvalcode> F39530 </approvalcode>
<meansubtype> Corporate Purchasing Card </meansubtype>
<cardholder> TEST </cardholder>
<cardexpirationdate>12/20</cardexpirationdate>
<ipaddress> 10.23.23.23 </ipaddress>
<protocoltypename></protocoltypename>
<testmode> 1 </testmode>
<customermessage> Completed. </customermessage>
<orderstate> Canceled </orderstate>
<processingname> Name </processingname>
<operationtype> 300 </operationtype>
<billnumber>511111100000001.2</billnumber>
<orderamount> 100.00 </orderamount>
<ordercurrency> RUB </ordercurrency>
<slipno>111111</slipno>
<packetdate> 01.01.2011 12:36:31 </packetdate>
<signature></signature>
</order> </orders> </result>
```

The field <slipno> is used only for processings: UCS, Raiffeisenbank, Multicard and Russian Standard. The values of this parameter in result requests are described in the Table 5.14 of the Annex.

An example of request result in XML format, returning the error (wrong password):

```
<?xml version="1.0" encoding="utf-8" standalone="yes" ?>
<!DOCTYPE result [...]>
<result firstcode="7" secondcode="102" count="0"></result>
```

For the description of the first and second codes of the automated interfaces refer to Table 5.12 of the Annex. Tables 5.1, 5.2, 5.4, 5.8 also include the descriptions of possible order statuses, types of operations, response codes and currency codes, respectively. The first 6 digits and the last 4 digits of the card number are returned as the field <meannumber> value; the other digits are hidden under symbol *.

Web-service for SOAP-format (wscancel)

Web-service description for SOAP format can be found on page:

https://<SERVER-NAME>/cancel/wscancel.wsdl

An example of request for the payment cancellation by bankcard:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<Header/>
   <Body>
      <WSCancelRequestParams>
         <merchant_id xmlns="">423422</merchant_id>
         <billnumber xsi:type="xsd:string" xmlns="">500000210031071.1</billnumber>
         <login xsi:type="xsd:string" xmlns="">login</login>
         <password xsi:type="xsd:string" xmlns="">password</password>
         <amount xsi:type="xsd:string" xmlns="">23.23</amount>
         <currency xsi:type="xsd:string" xmlns="">RUB</currency>
      </WSCancelRequestParams>
   </Body>
</Envelope>
```

List of response parameters:

Parameter	Value
Order parameters (section <order>)	
billnumber	Unique order number in IPS Assist
ordernumber	Order number
testmode	Test mode
ordercomment	Comment
orderamount	Original amount of order
ordercurrency	Original currency of order
rate	Currency rate
orderdate	Date of order (GMT)
orderstate	Order status
Payer data (section <customer>)	
firstname	Payer's first name
lastname	Payer's last name
middlename	Payer's middle name
email	Payer's e-mail
Operation parameters (repeated section <operation>)	
billnumber	Extended format of Billnumber: billnumber.<operation number>
operationtype	Operation type
operationstate	Operation status
amount	Operation amount
currency	Currency of operation
ipaddress	Payer's IP-address
meantype_id	Payment means ID
meansubtype	Payment means subtype
meannumber	Number of payment means
cardholder	Payment means holder
cardexpirationdate	Card expired date
issuebank	Name of issue bank

Parameter	Value
bankcountry	Country of issue bank
responsecode	Response code
message	Operation result message
customermessage	Result message for a customer
recommendation	Recommendations
approvalcode	Authorization code
protocoltypename	Protocol
processingname	Processing
operationdate	Operation date and time (GMT)
slipno	Financial transaction identifier
Data packet properties (in section <result>)	
packetdate	Request issue date (GMT)
signature	Signature. Signature is calculated by following algorithm: 1. The following order parameters (in their string representations as they are provided in the replay): *billnumber, ordernumber, responsecode, amount, currency, meannumber, approvalcode, orderstate, packetdate* are joined in one string without any delimiter. 2. Resulting string is signed by the private RSA key of IPS Assist. 3. Resulting bit sequence is transferred as BASE64 coded string in signature field.

Note. The field <slipno> is used only for processings: UCS, Multicard and Russian Standard. The value of this parameter is returned immediately after the payment.

An example of request result of payment cancellation or refund:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ws="http://www.paysecure.ru/ws/">
   <soapenv:Body><ws:WSCancelResponseParams>
      <order>
         <billnumber>500000210031071</billnumber>
         <ordernumber>14092012-002</ordernumber>
         <testmode>0</testmode>
         <ordercomment>тестовый платеж</ordercomment>
         <orderamount>4010.00</orderamount>
         <ordercurrency>RUB</ordercurrency>
         <rate>1</rate>
         <orderdate>14.09.2012 09:29:38</orderdate>
         <orderstate>Canceled</orderstate>
         <customer>
            <firstname>Testov</firstname>
            <lastname>Test</lastname>
            <middlename>T</middlename>
            <email>test@test.ru</email>
         </customer>
         <operation>
            <billnumber>500000210031071.3</billnumber>
            <operationtype>300</operationtype>
            <operationstate>Завершено успешно.</operationstate>
            <amount>4010.00</amount>
            <currency>RUB</currency>
            <ipaddress>10.10.10.10</ipaddress>
            <meantype_id>1</meantype_id>
            <meansubtype></meansubtype>
            <meannumber>411111****1111</meannumber>
            <cardholder>TEST</cardholder>
            <cardexpirationdate>12/20</cardexpirationdate>
            <issuebank>Bank T</issuebank>
            <bankcountry>Россия</bankcountry>
            <responsecode>AS000</responsecode>
            <message></message>
```

```
            <customermessage>Завершено успешно</customermessage>
            <recommendation></recommendation>
            <approvalcode>X34209</approvalcode>
            <protocoltypename></protocoltypename>
            <processingname>Fake</processingname>
            <operationdate>14.09.2012 09:33:51</operationdate>
            <slipno>112211</slipno>
        </operation>
    </order>
    <packetdate>14.09.2012 09:33:57</packetdate>
    <signature>kA0DAAIRzfHw5YyCW...bQnThrGPVGBK6gh9bxUl1w==</signature>
  </ws:WSCancelResponseParams></soapenv:Body>
</soapenv:Envelope>
```

An example of request result, returning the error (wrong amount):

```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"><soapenv:Body><soapenv:Fau
lt><faultcode>soapenv:Server.generalException</faultcode><faultstring/><detail><ns:WSExc
eption xmlns:ns="http://www.paysecure.ru/ws/">
<firstcode>5</firstcode><secondcode>108</secondcode>
</ns:WSException></detail>
</soapenv:Fault></soapenv:Body></soapenv:Envelope>
```

4.2. Operations results within a specified period

The enterprise can also get the results of the transactions performed within a certain period by means of Web service.

To get the authorization results, send a request to IPS Assist server via HTTP POST or SOAP method (in UTF-8 coding).

The request URL for receiving the authorization results:

https://<SERVER-NAME>/resultbydate/resultbydate.cfm.

You can get the results via Web service only for a specified time period not exceeding 24 hours. For this, specify the values of parameters that set forth the sampling start date, and parameters setting the sampling end date, so that the difference between these dates is no more than 24 hours. Otherwise, the default values will be used for these parameters (for the last three hours). In other words, if parameters of the sampling start and end dates are not specified, or specified incorrectly, the results of the operations performed within the last three hours will be output as the request results. Please, note that the parameters of the sampling date and time shall be indicated for GMT/UTC time zone.

If the buyer interrupted the payment process before the selection of payment means then there no payment operation created in IPS Assist and there no operations on this order in the results displayed.

Attention! You can request the operations results only for the time period not exceeding 24 hours and with the maximum interval of 10 minutes.

List of request parameters

Parameter	Mandatory field	Adopted values	Default value	Description
Merchant_ID	Yes	Number		The enterprise identifier in IPS Assist
Login	Yes	8 - 20 characters		Login (Latin letters, digits and symbol _)
Password	Yes	8 - 20 characters		Password (Latin letters and digits)
TestMode	Yes	0 1	0	Mode (0 – operation mode, 1– test mode)
Language	No	RU EN	EN	Language of the results output
Format	No	1 – CSV 2 – WDDX 3 – XML 4 – SOAP	4	Format of the results output. Should be sent in POST request and shouldn't be sent in SOAP.
MeanType_ID	No	1 – VISA 2 – MasterCard 3 – DCL 4 – JCB 5 – AMEX 6 - MIR 30 – WebMoney 32 – YandexMoney 36 – QIWI 39 – QIWIBeeline 40 – QIWIMts 41 - QIWIMegafon	All values sampling by default	Sampling by types of payment means
Operationstate	No	N – created, P – being processed, S – completed, F – failed T – closed upon time expiration	All values sampling by default	Sampling by operation states. Use upper case only.
Operationtype	No	A – payment C – payment confirmation R – cancellation	All values sampling by default	Sampling by operation types. Use upper case only.
StartDay	No	dd	By default: minus three hours from the current time at the moment of sampling	Sampling start date (GMT)
StartMonth	No	mm		
StartYear	No	yyyy		
StartHour	No	hh		
StartMin	No	mm		
EndDay	No	dd	By default: current time at the moment of sampling	Sampling end date (GMT)
EndMonth	No	mm		
EndYear	No	yyyy		
EndHour	No	hh		
EndMin	No	mm		
ZipFlag	No	"0" – browser "1" – file "2" - ZIP	0	Format of the results output

Note. All request parameters are automatically validated. The validation rules are given in the Table 5.15 of the Annex.

Based on the values of the request parameters the replay information is selected and formatted.

For example, only successful payment operations by VISA cards can be received as the request result.

An example of HTTP POST results request returning the information on the completed payment operations by VISA cards in the test mode from 07:00 till 11:00 (GMT) 01.03.2011 in XML format:

```
<FORM ACTION="https://<SERVER-NAME>/resultbydate/resultbydate.cfm"
method="POST">
<INPUT TYPE="hidden" NAME="Merchant_ID" VALUE="Your Merchant_ID">
<INPUT TYPE="hidden" NAME="Login" VALUE="Your login">
<INPUT TYPE="hidden" NAME="Password" VALUE="Your password">
<INPUT TYPE="hidden" NAME="TestMode" VALUE="1">
<INPUT TYPE="hidden" NAME="Language" VALUE="EN">
<INPUT TYPE="hidden" NAME="MeanType_ID" VALUE="1">
<INPUT TYPE="hidden" NAME="Operationstate" VALUE="S">
<INPUT TYPE="hidden" NAME="Operation type" VALUE="A">
<INPUT TYPE="hidden" NAME="StartDay" VALUE="01">
<INPUT TYPE="hidden" NAME="StartMonth" VALUE="03">
<INPUT TYPE="hidden" NAME="StartYear" VALUE="2011">
<INPUT TYPE="hidden" NAME="StartHour" VALUE="07">
<INPUT TYPE="hidden" NAME="StartMin" VALUE="00">
<INPUT TYPE="hidden" NAME="EndDay" VALUE="01">
<INPUT TYPE="hidden" NAME="EndMonth" VALUE="03">
<INPUT TYPE="hidden" NAME="EndYear" VALUE="2011">
<INPUT TYPE="hidden" NAME="EndHour" VALUE="11">
<INPUT TYPE="hidden" NAME="EndMin" VALUE="00">
<INPUT TYPE="hidden" NAME="Format" VALUE="3">
<INPUT TYPE="Submit"></FORM>
```

List of response parameters:

Parameter	Value
ordernumber	Order number
billnumber	Extended format of billnumber
testmode	Test mode
ordercomment	Comment
orderamount	Original amount of order
ordercurrency	Original currency of order
amount	Operation amount
currency	Operation currency
rate	Currency rate
lastname	Payer's last name
firstname	Payer's first name
middlename	Payer's middle name
Email	Payer's e-mail
clientip	Transactor's IP-address
ipaddress	Payer's IP-address
meantype_id	Payment means ID
meantypename	Type of payment means
meansubtype	Payment means subtype

Parameter	Value
meannumber	Number of payment means
cardholder	Payment means holder
issuebank	Name of issue bank
bankcountry	Country of issue bank
orderdate	Date of order
orderstate	Order state
responsecode	Response code
message	Message
customermessage	Result message for a customer
recommendation	Recommendations
approvalcode	Authorization code
protocolname	Protocol
processingname	Processing
operationtype	Operation type
operationdate	Operation date and time (GMT)
authresult	3Ds authorization result (Y – success, N - fail, A - Attempt, U – unknown)
authrequired	The card involvement in 3Ds check result (1 – involved, 0 – not involved, -1 – unknown, null – error appear during involvement check)
slipno	Financial transaction identifier
packetdate	Request issue date
checkvalue	uppercase(md5(uppercase(md5(SALT) + md5(X)))), where SALT – secret word; X – result of the following parameters string concatenation: merchant_id, ordernumber, orderamount, ordercurrency, orderstate (without delimiters), + means string concatenation.
cardexpirationdate	Card expired date

Attention! The *testmode* value of response has to be checked. If the payment was made in test mode (*testmode* = 1), then the shipment of goods or providing of services for the current request is not required.

An example of field for outputting the results in XML format

```
<?xml version='1.0' encoding='utf-8' standalone='yes'?>
<!DOCTYPE result [
<!ATTLIST result
        firstcode CDATA #REQUIRED
        secondcode CDATA #REQUIRED
        count CDATA #REQUIRED>
<!ELEMENT result (payment*)>
<!ELEMENT payment
(ordernumber?,billnumber?,testmode?,ordercomment?,orderamount?,ordercurrency?,amount?,c
urrency?,rate?,firstname?,lastname?,middlename?,email?,clientip?,ipaddress?,meantype_id?,me
antypename?,meansubtype?,meannumber?,cardholder?,issuebank?,bankcountry?,orderdate?,or
derstate?,responsecode?,message?,customermessage?,recommendation?,approvalcode?,protoco
ltypename?,processingname?,operationtype?,operationdate?,authresult?,authrequired?,
slipno?,packetdate?,signature?,checkvalue?,cardexpirationdate?,)>
<!ELEMENT ordernumber (#PCDATA)>
<!ELEMENT billnumber (#PCDATA)>
<!ELEMENT testmode (#PCDATA)>
<!ELEMENT ordercomment (#PCDATA)>
<!ELEMENT orderamount (#PCDATA)>
<!ELEMENT ordercurrency (#PCDATA)>
<!ELEMENT amount (#PCDATA)>
<!ELEMENT currency (#PCDATA)>
<!ELEMENT rate (#PCDATA)>
<!ELEMENT firstname (#PCDATA)>
<!ELEMENT lastname (#PCDATA)>
<!ELEMENT middlename (#PCDATA)>
<!ELEMENT email (#PCDATA)>
<!ELEMENT clientip (#PCDATA)>
<!ELEMENT ipaddress (#PCDATA)>
<!ELEMENT meantype_id (#PCDATA)>
<!ELEMENT meantypename (#PCDATA)>
<!ELEMENT meansubtype (#PCDATA)>
<!ELEMENT meannumber (#PCDATA)>
<!ELEMENT cardholder (#PCDATA)>
<!ELEMENT issuebank (#PCDATA)>
<!ELEMENT bankcountry (#PCDATA)>
<!ELEMENT orderdate (#PCDATA)>
<!ELEMENT orderstate (#PCDATA)>
<!ELEMENT responsecode (#PCDATA)>
<!ELEMENT message (#PCDATA)>
<!ELEMENT customermessage (#PCDATA)>
<!ELEMENT recommendation (#PCDATA)>
<!ELEMENT approvalcode (#PCDATA)>
<!ELEMENT protocoltypename (#PCDATA)>
<!ELEMENT processingname (#PCDATA)>
<!ELEMENT operationtype (#PCDATA)>
<!ELEMENT operationdate (#PCDATA)>
<!ELEMENT authresult (#PCDATA)>
<!ELEMENT authrequired (#PCDATA)>
<!ELEMENT slipno (#PCDATA)>
<!ELEMENT packetdate (#PCDATA)>
<!ELEMENT signature (#PCDATA)>
<!ELEMENT checkvalue (#PCDATA)>
<!ELEMENT cardexpirationdate (#PCDATA)>]>
<result firstcode='0' secondcode='0' count='17'>
<payment>
<ordernumber>0001-01</ordernumber>
<billnumber>511111100000001.1</billnumber>
<testmode>1</testmode>
<ordercomment>test payment</ordercomment>
<orderamount>100.00</orderamount>
<ordercurrency>RUB</ordercurrency>
<amount>100.00</amount>
```

```
<currency>RUB</currency>
<rate>1</rate>
<firstname>Test</firstname>
<lastname>Testov</lastname>
<middlename>Testovich</middlename>
<email>test@testpost.ru</email>
<clientip>111.23.11.23</clientip>
<ipaddress>0.0.0.0</ipaddress>
<meantype_id>1</meantype_id>
<meantypename>VISA</meantypename>
<meansubtype>Corporate Purchasing Card</meansubtype>
<meannumber>411111****1111</meannumber>
<cardholder>TEST</cardholder>
<issuebank>BANK </issuebank>
<bankcountry>Russia</bankcountry>
<orderdate>01.03.2011 08:39:25</orderdate>
<orderstate>Approved</orderstate>
<responsecode>AS000</responsecode>
<message>Success  </message>
<customermessage>Success  </customermessage>
<recommendation></recommendation>
<approvalcode>F31720</approvalcode>
<protocoltypename>NET</protocoltypename>
<processingname>Name</processingname>
<operationtype>100</operationtype>
<operationdate>01.02.2012 06:39:42</operationdate>
<authresult/>
<authrequired>0</authrequired>
<slipno>111111</slipno>
<packetdate>01.03.2011 10:55:51</packetdate>
<checkvalue> </checkvalue>
<cardexpirationdate>12/20</cardexpirationdate>
</payment>
<payment>
…
</payment>
</result>
```

An example of field for outputting the results in CSV format:

```
"ordernumber";"billnumber";"testmode";"ordercomment";"orderamount";"ordercurrency";"amo
unt";"currency";"rate";"firstname";"lastname";"middlename";"email";"clientip";"ipaddress";"m
eantype_id";"meantypename";"meansubtype";"meannumber";"cardholder";"issuebank";"bankc
ountry";"orderdate";"orderstate";"responsecode";"message";"customermessage";"recommend
ation";"approvalcode";"protocoltypename";"processingname";"operationtype";"operationdate";
"authresult";"authrequired";"slipno";"packetdate";"checkvalue";"cardexpirationdate";
"001-1";"500000000000000.1";"0";"test payment";"70.00";"USD";"1
975.48";"RUB";"28.2212";"Testov";"упр";"S.";"test@test.ru";"10.20.10.00";"0.0.0.0";"1";"VIS
A";"Classic";"411111****1111";"TEST";"New Bank";"Russia";"18.04.2011
07:51:42";"Paid";"AS000";"Completed.";"Completed.";"";"X28577";"NET";"Fake";"100";"01.02
.2012 06:39:42";"";"0";"111111";"18.04.2011
12:27:32";"5189407747A5435E9E7A0C06A7BC18CD";"12/20";
```

If an error occurs, Web service will return the error first and second code values, for example, in XML format (in case of wrong password):

```
<?xml version="1.0" encoding="utf-8" standalone="yes" ?>
<!DOCTYPE result [...]>
<result firstcode="7" secondcode="102" count="0" /></result>
```

For the description of the first and second codes of the automated interfaces refer to Table 5.12 of the Annex. Tables 5.1, 5.2, 5.4, 5.8 also include the descriptions of possible order statuses, types of operations, response codes, type and subtypes of payment instruments and currency

codes, respectively. The first 6 digits and the last 4 digits of the card number are returned as the field <meannumber> value; the other digits are hidden under symbol *.

The WEB-service description for SOAP format can be seen on page:

https://<SERVER-NAME>/resultbydate/resultbydate.wsdl .

Replay example in SOAP format:

```xml
<?xml version="1.0" encoding="UTF-8"?><soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ws="http://www.paysecure.ru/ws/"><soapenv:Body>
<ws:resultbydateResponse><resultbydate><payment>
<ordernumber>18062012_SDR</ordernumber>
<billnumber>550000110000001.1</billnumber>
<testmode>1</testmode>
<ordercomment>тестовый платеж</ordercomment>
<orderamount>21.00</orderamount>
<ordercurrency>RUB</ordercurrency>
<amount>21.00</amount>
<currency>RUB</currency>
<rate>1</rate>
<firstname>Test</firstname>
<lastname>Testov</lastname>
<middlename>T.</middlename>
<email>test@test.ru</email>
<clientip>10.10.10.10</clientip>
<ipaddress>0.0.0.0</ipaddress>
<meantype_id>2</meantype_id>
<meantypename>MasterCard</meantypename>
<meansubtype>Standart</meansubtype>
<meannumber>546792****4128</meannumber>
<cardholder>TEST</cardholder>
<issuebank>Bank</issuebank>
<bankcountry>RUS</bankcountry>
<orderdate>18.06.2012 11:10:06</orderdate>
<orderstate>Approved</orderstate>
<responsecode>AS000</responsecode>
<message>Success </message>
<customermessage>Success</customermessage>
<recommendation/>
<approvalcode>X40334</approvalcode>
<protocoltypename>NET</protocoltypename>
<processingname>Fake</processingname>
<operationtype>100</operationtype>
<operationdate>18.06.2012 11:10:07</operationdate>
<authresult/>
<authrequired>0</authrequired>
<slipno>111111</slipno>
<packetdate>18.06.2012 11:22:37</packetdate>
<checkvalue>45A33F800F2BD16C02E3D2F5C81557A0</checkvalue>
<cardexpirationdate>12/20</cardexpirationdate>
</payment>
</resultbydate></ws:resultbydateResponse ></soapenv:Body></soapenv:Envelope>
```

Note. The field <slipno> is used only for processings: UCS, Raiffeisenbank, Multicard and Russian Standard. The values of this parameter in result requests are described in the Table 5.14 of the Annex.

4.3. Recurring payments

The service is intended for initiation payments for continued services by subscription. This possibility is determined by the settings of the acquiring bank processing. For more information, contact the support service support@assist.ru.

The parameter **RecurringIndicator** = 1 should be set in initial authorization request (see paragraph 2.1) in order to initiate the recurrent payment. Also the parameters of the range of amounts in subsequent recurring payments, payment frequency (in days) and the end date of subscription should be provided.

Then periodically the company will initiate the payment, setting the payment amount only and the rest required payment information (bankcard data) is taken from the original payment.

To make the subsequent recurring payment, send a request to IPS Assist server by HTTP POST or SOAP method (in UTF-8 coding).

The request URL for the recurring payment:

https://<SERVER-NAME>/recurrent/rp.cfm.

List of request parameters

Parameter	Mandatory field	Adopted values	Default values	Description
BillNumber	Yes	15 or 16 characters		BillNumber of initial order
OrderNumber	Yes	128 characters		New order number for this recurrent payment
Merchant_ID	Yes	Number		The enterprise identifier in IPS Assist
Login	Yes	8-20 characters		Login (Latin letters, digits and symbol _)
Password	Yes	8-20 characters		Password (Latin letters and digits)
Amount	Yes	Number, 15 digits (delimiter: ',')		Recurring payment amount The value of recurring payment amount should be between the values of the min and max amounts of recurring payments transferred at the primary request for authorization of the initiating payment.
Currency	Yes	3 characters		Recurring payment currency The currency of the recurring payment should be equal to the currency of the initiating one, otherwise the order closes with an error.
OrderComment	No	255 characters		Comment
Language	No	RU EN	EN	Language of the results output
Format	No	1 – CSV 2 – WDDX 3 – XML 4 - SOAP	1 for POST request and 4 for SOAP	Format of the results output

Note. All request parameters are automatically validated. The validation rules are given in the Table 5.15 of the Annex.

Request example for HTTP POST format:

```
<FORM ACTION="https://<SERVER-NAME>/recurrent/rp.cfm" METHOD="POST">
<INPUT TYPE="HIDDEN" NAME="BillNumber" VALUE="511111100000001.1">
<INPUT TYPE="HIDDEN" NAME="OrderNumber" VALUE="A1_R1">
<INPUT TYPE="HIDDEN" NAME="Merchant_ID" VALUE="Your Merchant_ID">
<INPUT TYPE="HIDDEN" NAME="Login" VALUE="Your login">
<INPUT TYPE="HIDDEN" NAME="Password" VALUE="Your password">
<INPUT TYPE="HIDDEN" NAME="Amount" VALUE="20">
<INPUT TYPE="HIDDEN" NAME="Currency" VALUE="RUB">
<INPUT TYPE="HIDDEN" NAME="Format" VALUE="3">
<INPUT TYPE="HIDDEN" NAME="Language" VALUE="EN">
<INPUT TYPE="SUBMIT" NAME="Submit" VALUE="Buy">
</FORM>
```

The list of response parameters:

Parameter	Value
billnumber	Unique order number in IPS Assist (extended format)
ordernumber	Order number
testmode	Test mode
ordercomment	Comment
orderamount	Original amount of order
ordercurrency	Original currency of order
firstname	Payer's first name
lastname	Payer's last name
middlename	Payer's middle name
Email	Payer's e-mail
orderdate	Date of order (in GMT)
orderstate	Order status
packetdate	Request issue date (in GMT)
signature	Signature
operationtype	Operation type
operationstate	Operation status
amount	Operation amount
currency	Operation currency
ipaddress	Payer's IP-address
meantype_id	Type of payment means
meansubtype	Payment means subtype
meannumber	Number of payment means
cardholder	Payment means holder
cardexpirationdate	Card expired date
issuebank	Name of issue bank
bankcountry	Country of issue bank
responsecode	Response code
rate	Currency rate

Parameter	Value
message	Operation result message
customermessage	Result message for a customer
recommendation	Recommendation
approvalcode	Authorization code
protocolname	Protocol
processingname	Processing

For the description of returned parameters refer to the Annex.

Six first and last four digits of the card number are returned as the field <meannumber> value here and after in all Web services; the remaining figures being hidden under ***** symbol.

5. Annexes

Terms and definitions

Order is created in IPS Assist after the authorized request is received by the system server from Internet shop with all necessary parameters. Several operations can be executed for one order: payment operation, financial confirmation operation (if the shop uses the double-stage operation mode) and cancellation operation. There can be only one successful payment operation and one successful financial confirmation operation per one order.

Payment operation – authorization of a bankcard, that leads to withdrawal (or blocking) some amount from the holder's account.

Payment confirmation operation – this operation is executed by Internet-shop operating based on the double-stage mechanism, for the confirmation of successful payment operation. A financial transaction is performed only after the payment confirmation operation.

Cancellation operation – this operation is performed, when a cancel the authorization by bankcard or refund is required.

Financial transaction – submission of the payment information to the processing center for cash withdrawal from card.

Original amount and currency – the amount and currency code of the payment which are sent in the payment parameters to IPS Assist server.

The authorization amount and currency – the amount and currency which are sent to Processing Center for the bankcard authorization.

Billnumber – unique number in IPS Assist which corresponding to a given order. The extended format of the Billnumber looks like: 500000000000000.1, where the first 15 or 16 digits are the unique number which corresponding to the order, whereas the digit after the point is the sequential number of the operation that is performed within the order.

Table 5.1. OrderState field values

Orderstate	Meaning	Description
In Process	In process	Order created.
Delayed	In wait for payment confirmation	Payment operation for this order has been performed using the double-stage operation mode but not confirmed yet.
Approved	Payment performed	Payment operation for the given order successfully completed.
PartialApproved	Partially paid	Payment operation performed for a part of the order amount (not used).
PartialDelayed	Partially confirmed	Payment confirmed for a part of the payment amount.
Canceled	Cancelled	Cancelled for full payment amount.
PartialCanceled	Partially cancelled	Cancelled for partial payment amount.

Declined	Declined	Payment failed.
Timeout	Closed upon timeout	Order closed by timeout.

Table 5.2. OperationType field values

Code	Parameter description
100	Approve
200	Charge
300	PaymentCancel
400	Verify
500	Accrual
600	AccrualCancel

Table 5.3. OperationState field values

Operationstate	Description
New	Created
In Process	In the process
Success	Successfully done
Failure	Finished with a failure
TimeOut	Closed by time out

Table 5.4. Response_Code

Parameter	Description
AS000	OPERATION COMPLETED
AS100	AUTHORIZATION DECLINED
AS101	AUTHORIZATION DECLINED. Incorrect card parameters
AS102	AUTHORIZATION DECLINED. Insufficient cash
AS104	AUTHORIZATION DECLINED. Incorrect card validity period
AS105	AUTHORIZATION DECLINED. Card operations limit exceeded
AS107	AUTHORIZATION DECLINED. Data reception error
AS108	AUTHORIZATION DECLINED. Suspicion of fraud
AS109	AUTHORIZATION DECLINED. Operations limit exceeded
AS110	AUTHORIZATION DECLINED. Authorization via 3D-Secure required
AS200	REPEAT AUTHORIZATION
AS300	OPERATION IN PROCESS. WAIT
AS400	NO PAYMENTS WITH SUCH PARAMETERS EXIST
AS998	SYSTEM ERROR. Connect to ASSIST

Table 5.5. Types of payment means *MeanTypeName*

ID	Type name	Description
1	VISA	Visa
2	MasterCard	MasterCard

3	DCL	Diners Club
4	JCB	Japan Credit Bureau
5	AMEX	American Express
6	MIR	MIR Card
10	Discover	Discover
12	Points	Points
30	WebMoney	WebMoney
32	YandexMoney	YandexMoney
36	QIWI	QIWI
37	BankClient	BankClient
39	QIWIBeeline	QIWIBeeline
40	QIWIMts	QIWIMts
41	QIWIMegafon	QIWIMegafon
42	QIWITele2	QIWITele2
60	ApplePay	ApplePay
61	SamsungPay	SamsungPay
62	GooglePay	GooglePay
301	Aura	Aura BoaCompra
302	Elo	Elo BoaCompra
303	HiperCard	HiperCard BoaCompra
304	PersonalCard	PersonalCard BoaCompra

Table 5.6. Subtypes of payment means *MeanSubType*

ID	Type of payment means	Payment means subtype
1	VISA	Corporate/BusinessCard
2	VISA	Standart
3	VISA	Electronic
4	VISA	Corporate Fleet Card
5	VISA	Gold
6	VISA	Corporate Card
8	VISA	Corporate Purchasing Card
9	VISA	Standart (2)
10	VISA	Word Signia Card
11	VISA	Gold Debit Card
12	VISA	Maestro
13	VISA	MDO
14	VISA	MDP
15	VISA	Debit Card
16	VISA	Platinum Card

17	VISA	MPP
18	VISA	Private Label Generic Service
19	VISA	Proprietary
20	VISA	Cirrus
21	VISA	eurocheque Pictogram
22	MasterCard	ATM
23	MasterCard	Visa Busines
24	MasterCard	Classic
25	MasterCard	Commerce
26	MasterCard	Electron
27	MasterCard	Visa travelMoney Card
28	MasterCard	Visa Infinity Card
29	MasterCard	Platinum
30	MasterCard	Visa signature Card
31	MasterCard	COPAC
32	MasterCard	Private Label Card
33	MasterCard	MasterCard
34	MasterCard	Visa Gold
35	MasterCard	Proprietary Card
36	MasterCard	Corporate T&E Card
37	MasterCard	Purchasing Card
38	MasterCard	Travel Voucher
39	MasterCard	Reserved
104	VISA	EUROCHEQUE/CIRRUS
105	VISA	MASTERCARD
106	VISA	EUROCARD/MASTERCARD
6001	ApplePay	Visa ApplePay
6002	ApplePay	MasterCard ApplePay
6005	ApplePay	AMEX ApplePay
6006	ApplePay	MIR ApplePay
6101	SamsungPay	Visa SamsungPay
6102	SamsungPay	MasterCard SamsungPay
6105	SamsungPay	AMEX SamsungPay
6106	SamsungPay	MIR SamsungPay
6201	GooglePay	Visa GooglePay
6202	GooglePay	MasterCard GooglePay
6205	GooglePay	AMEX GooglePay
6206	GooglePay	MIR GooglePay

Table 5.7. Languages

Code	Language
RU	Russian
EN	English

Table 5.8. Currency codes

Code	Currency
RUR	Russian Rouble
USD	US Dollar
EUR	EURO
BYR	Belarussian Ruble before 01.07.2016
BYN	Belarussian Ruble from 01.07.2016
AMD	Armenia Dram
AUD	Australian dollar
AZN	Azerbaijanian manat
BGN	Bulgarian lev
BRL	Brazilian real
CAD	Canadian dollar
CHF	Swiss franc
CNY	Chinese Renminbi yuan
CZK	Czech koruna
DKK	Danish krone
GBP	UK pound sterling
HUF	Hungarian forint
INR	Indian rupee
JPY	Japanese yen
KGS	Kirghiz som
KRW	South Korean won
KZT	Kazakhstan tenge
MDL	Moldavian leu
NOK	Norwegian krone
PLN	Polish zloty
RON	New Romanian leu
SEK	Swedish krona
SGD	Singapore dollar
TJS	Tajikistani somoni
TMT	New Turkmenistani manat
TRY	New Turkish lira
UAH	Ukrainian hryvnia
UZS	Uzbekistani som

Code	Currency
ZAR	South African rand

Table 5.9. Country codes (ISO 3166)

Code	Country
AUS	Australia
AUT	Austria
AZE	Azerbaijan
ALB	Albania
DZA	Algeria
ASM	American Samoa
AGO	Angola
AND	Andorra
ATG	Antigua
ANT	Antilles
ARG	Argentine
ARM	Armenia
ABW	Aruba
AFG	Afghanistan
BHS	Bahama Islands
BGD	Bangladesh
BRB	Barbados
BHR	Bahrain
BLR	Belarus
BLZ	Belize
BEL	Belgium
BEN	Benin
BMU	Bermuda Islands
BGR	Bulgaria
BOL	Bolivia
BIH	Bosnia and Herzegovina
BWA	Botswana
BRA	Brazil
BRN	Brunei
BFA	Burkina Faso
BDI	Burundi
BTN	Bhutan
VUT	Vanuatu
VAT	Vatican
GBR	Great Britain
HUN	Hungary
VEN	Venezuela
VGB	Virgin Islands
TMP	East Timor
VNM	Vietnam
GAB	Gabon

Code	Country
HTI	Haiti
GUY	Guyana
GMB	Gambia
GHA	Ghana
GLP	Guadeloupe
GTM	Guatemala
GUF	Guiana
GIN	Republic of Guinea
GNB	Guinea-Bissau
DEU	Germany
GIB	Gibraltar
HND	Honduras
HKG	Hong-Kong
GRD	Grenada
GRL	Greenland
GRC	Greece
GEO	Georgia
GUM	Guam
DNK	Denmark
DJI	Djibouti
DMA	Dominica
DOM	Dominican Republic
EGY	Egypt
ZAR	Zaire
ZMB	Zambia
ESH	Western Sahara
ZWE	Zimbabwe
ISR	Israel
IND	India
IDN	Indonesia
JOR	Jordan
IRQ	Iraq
IRN	Iran
IRL	Ireland
ISL	Iceland
ESP	Spain
ITA	Italy
YMD	Yemen
KAZ	Kazakhstan
CYM	Cayman Islands
KHM	Cambodia
CMR	Cameroon
CAN	Canada
QAT	Qatar
KEN	Kenya

Code	Country
CYP	Cyprus
CHN	China
CCK	Cocos Islands
COL	Columbia
COM	Comoro Islands
COG	Congo
PRK	Korea, Democratic People's Republic of Korea
CRI	Costa Rica
CUB	Cuba
KWT	Kuwait
KGZ	Kyrgyzstan
LAO	Laos
LVA	Latvia
LSO	Lesotho
LBR	Liberia
LBN	Lebanon
LBY	Libya
LTU	Lithuania
LIE	Liechtenstein
LUX	Luxembourg
MUS	Mauritius
MRT	Mauritania
MDG	Madagascar
MAC	Macau
MKD	Macedonia
MYS	Malaysia
MLI	Mali
MDV	Maldives
MLT	Malta
MAR	Morocco
MTQ	Martinique
MHL	Marshall Islands
MEX	Mexico
FSM	Micronesia
MOZ	Mozambique
MDA	Moldova
MCO	Monaco
MNG	Mongolia
MSR	Montserrat
MMR	Myanmar (Burma)
NAM	Namibia
NPN	Nepal
NER	Niger
NGA	Nigeria
NLD	Netherlands

Code	Country
NIC	Nicaragua
NZL	New Zealand
NCL	New Caledonia
NOR	Norway
ARE	United Arab Emirates
OMN	Oman
PAK	Pakistan
PLW	Palau
PSE	Palestine
PAN	Panama
PNG	Papua New Guinea
PRY	Paraguay
PER	Peru
PYF	Polynesia
POL	Poland
PRT	Portugal
PRI	Puerto Rico
RUS	Russia
RWA	Rwanda
ROM	Romania
SLV	Salvador
WSM	Samoa
SMR	San Marino
SAU	Saudi Arabia
SWZ	Swaziland
SYC	Seychelles
SEN	Senegal
LCA	Saint Lucia
SGP	Singapore
SYR	Syria
SVK	Slovakia
SVN	Slovenia
SLB	Solomon Islands
SOM	Somalia
SDN	Sudan
SUR	Surinam
USA	USA
SLE	Sierra Leone
TJK	Tadzhikistan
THA	Thailand
TWN	Taiwan
TZA	Tanzania
TGO	Togo
TON	Tonga
TTO	Trinidad and Tobago

Code	Country
TUN	Tunisia
TKM	Turkmenistan
TUR	Turkey
UGA	Uganda
UZB	Uzbekistan
UKR	Ukraine
URY	Uruguay
FJI	Fiji
PHL	Philippines
FIN	Finland
FLK	Falkland Islands
FRA	France
HRV	Croatia
CAF	Central Africa
TCD	Chad
CZE	Czech Republic
CSK	Czechoslovakia
CHL	Chile
CHE	Switzerland
SWE	Sweden
LKA	Sri Lanka
ECU	Ecuador
GNQ	Equatorial Guinea
EST	Estonia
ETH	Ethiopia
ZAF	Republic of South Africa
YUG	Yugoslavia
KOR	South Korea
JAM	Jamaica
JPN	Japan

Table 5.10. Regional codes

Code	Region
1	Republic of Adygeya
2	Republic of Bashkortostan
3	Republic of Buryatia
4	Republic of Altai
5	Republic of Dagestan
6	Ingush Republic
7	Kabardino-Balkar Republic
8	Republic of Kalmykia
9	Karachay-Cherkess Republic
10	Republic of Karelia

Code	Region
11	Komi Republic
12	Republic of Mariy-El
13	Mordovian Republic
14	Republic of Sakha (Yakutia)
15	Republic of North Ossetia-Alaniya
16	Republic of Tatarstan
17	Republic of Tuva
18	Udmurt Republic
19	Republic of Khakassia
20	Chechen Republic
21	Chuvash Republic
22	Altai Territory
23	Krasnodar Territory
24	Krasnoyarsk Territory
25	Primorsk Territory
26	Stavropol Territory
27	Khabarovsk Territory
28	Amur Region
29	Arkhangelsk Region
30	Astrakhan Region
31	Belgorod Region
32	Bryansk Region
33	Vladimir Region
34	Volgograd Region
35	Vologda Region
36	Voronezh Region
37	Ivanovo Region
38	Irkutsk Region
39	Kaliningrad Region
40	Kaluga Region
41	Kamchatka Region
42	Kemerovo Region
43	Kirov Region
44	Kostroma Region
45	Kurgan Region
46	Kursk Region
47	Leningrad Region
48	Lipetsk Region
49	Magadan Region

Code	Region
50	Moscow Region
51	Murmansk Region
52	Nizhny Novgorod Region
53	Novgorod Region
54	Novosibirsk Region
55	Omsk Region
56	Orenburg Region
57	Orel Region
58	Penza Region
59	Perm Region
60	Pskov Region
61	Rostov Region
62	Ryazan Region
63	Samara Region
64	Saratov Region
65	Sakhalin Region
66	Sverdlovsk Region
67	Smolensk Region
68	Tambov Region
69	Tver Region
70	Tomsk Region
71	Tula Region
72	Tyumen Region
73	Ulyanovsk Region
74	Chelyabinsk Region
75	Chita Region
76	Yaroslavl Region
77	Moscow
78	Saint Petersburg
79	Jewish Autonomous Region
80	Agin-Buryat Autonomous District
81	Komi-Permyak Autonomous District
82	Koryak Autonomous District
83	Nenets Autonomous District
84	Taymir (Dolgano-Nenets) Autonomous District
85	Ust-Ordyn Buryat Autonomous District
86	Khanty-Mansiysk Autonomous District
87	Chukotka Autonomous District
88	Evenk Autonomous District

Code	Region
89	Yamalo-Nenets Autonomous District

Table 5.11. State codes

Code	State
AL	Alabama
AK	Alaska
AB	Alberta
AZ	Arizona
AR	Arkansas
BC	British Columbia
CA	California
CO	Colorado
CT	Connecticut
DE	Delaware
DC	District of Columbia
FL	Florida
GA	Georgia
HI	Hawaii
ID	Idaho
IL	Illinois
IN	Indiana
IA	Iowa
KS	Kansas
KY	Kentucky
LB	Labrador
LA	Louisiana
ME	Maine
MB	Manitoba
MD	Maryland
MA	Massachusetts
MI	Michigan
MN	Minnesota
MS	Mississippi
MO	Missouri
MT	Montana
NE	Nebraska
NV	Nevada
NB	New Brunswick
NH	New Hampshire

Code	State
NJ	New Jersey
NM	New Mexico
NY	New York
NF	Newfoundland
NC	North Carolina
ND	North Dakota
NT	Northwest Territories
NS	Nova Scotia
OH	Ohio
OK	Oklahoma
ON	Ontario
OR	Oregon
PA	Pennsylvania
PE	Prince Edward Island
PR	Puerto Rico
PQ	Quebec
RI	Rhode Island
SK	Saskatchewan
SC	South Carolina
SD	South Dakota
TN	Tennessee
TX	Texas
UT	Utah
VT	Vermont
VA	Virginia
WA	Washington
WV	West Virginia
WI	Wisconsin
WY	Wyoming
YT	Yukon Territory

Table 5.12. Codes of automated interfaces

First code	Description
0	Success
1	Error
2	Internal error
3	No mandatory parameter
4	Parameter format error
5	Incorrect parameter value
6	Incorrect system version

7	Authentication error
8	Authorization error
9	Encryption error
10	Object not found
11	Duplicate object
12	Object is blocked
14	Forbidden object
15	Forbidden operation
16	Operation timeout
17	Limits error
18	Suspicion of fraud
19	Access denied
20	3D secure error
21	Operation declined

Second code	Description
0	No additional information
1	Unexpected error
2	Generated document is too large
3	Interface request interval is exceeded
4	Sampling interval is too big
5	Key encryption error
6	Key decryption error
100	Parameter MERCHANT_ID
101	Parameter LOGIN
102	Parameter PASSWORD
103	Parameter FORMAT
104	Parameter DATE
105	Parameter CURRENCY
106	Parameter MEANNUMBER
107	Parameter ORDERNUMBER
108	Parameter AMOUNT
109	Parameter DELAY
110	Parameter COMMENT
111	Parameter MEANTYPE
112	Parameter EXPIREMONTH
113	Parameter EXPIREYEAR
114	Parameter CARDHOLDER
115	Parameter CSC2
116	Parameter CLIENTIP

117	Parameter LASTNAME
118	Parameter FIRSTNAME
119	Parameter MIDDLENAME
120	Parameter EMAIL
121	Parameter ADDRESS
122	Parameter PHONE
123	Parameter CITY
124	Parameter STATE
125	Parameter ZIP
126	Parameter LIMITTYPE
127	Parameter LANGUAGE
128	Parameter COUNTRY
129	Parameters STARTDAY and/or STARTMONTH and/or STARTYEAR
130	Parameters ENDDAY and/or ENDMONTH and/or ENDYEAR
131	Parameter SUCCESS
132	Parameter ZIPFLAG
133	Parameter HEADER
134	Parameter HEADER1
135	Parameter DELIMITER
136	Parameter OPENDELIMITER
137	Parameter CLOSEDELIMITER
138	Parameter ROWDELIMITER
139	Parameter FIELDS
140	Parameter SSL
141	Parameters LOGIN and/or PASSWORD
142	Parameter EXPIREMONTH and/or EXPIREYEAR
143	Parameter BILLNUMBER
144	Parameter PROTECTCODE
145	Parameter OPTYPE
146	Parameter OPSTATE
147	Parameter RPSERIES
148	Parameter RPNUMBER
149	Parameter ASSISTID
150	Parameter PIN
153	Parameter TICKET_NUMBER, PNR
154	Parameter URL
155	Parameter TRANSACT_ID
156	Parameter TID
157	Parameter MID
159	Parameter BIN

161	Parameter BillingNumber
163	Parameter TRANSACTSTATE
164	Parameter ORDERSTATE
165	Parameter TRANSACTTYPE
167	Parameter Currency RATE
170	Parameter ResponseCode
173	Parameter IP-ADDRESS
176	Parameter PNR
177	Parameter PaymentMode
179	Parameter CHEQUE
185	Parameter BILLSENDTYPE
186	Parameter HASHTYPE
187	Parameter BILLNO
188	Parameter BILLNOTEMPLATE
189	Parameter BILL_ID
190	Parameter BILLSTATE
200	Object Enterprise
201	Object Order
202	Object Customer
203	Object Bankcard
204	Object Bank
205	Object Processing
206	Object Terminal
207	Object Country
208	Object Currency
209	Object Currency rate
210	Object Commission
211	Object Limit
212	Parameter TestMode
213	Parameter PaymentType
214	Object Template
215	Object SOAP PACKET
216	Object Operation
217	Object Meantype (PaymentSystem)
218	Object Payment means
220	Object TRANSACTION
221	Object User
225	Object Enterprise
226	Object Company
228	Object Bill

300	Authorization cancellation
301	Refund
302	Financial confirmation (deposit)
305	Financial transaction cancellation
306	Payment operation
307	Confirmation operation
308	Cancellation operation
309	Operation Bill Revoke
320	Recurring payment
350	Web service
400	Error: Directory Server
401	Reaction settings not found
402	Authorization expectation via 3D-Secure
403	Authorization denied by DS

Table 5.13. Test cards

Type	Card number	Card holder	Expire Date	CSC2	Result
VISA	4111111111111111	TEST	12/2020	123	Success
VISA	4627100101654724	TEST	12/2020	123	Success
VISA	4486441729154030	TEST	12/2020	123	Pick up. Stolen card
VISA	4024007123874108	TEST	12/2020	123	Insufficient funds
VISA	4750657776370372	TEST	12/2020	123	Transaction not permitted to CH
MasterCard	5467929858074128	TEST	12/2020	123	Success
MasterCard	5529263272356119	TEST	12/2020	123	Success
MasterCard	5538300838605560	TEST	12/2020	123	Pick up. Stolen card
MasterCard	5569191777864116	TEST	12/2020	123	Insufficient funds
MasterCard	5124585563456201	TEST	12/2020	123	Transaction not permitted to CH
DCL	30000000000004	TEST	12/2020	123	Success
DCL	38000000000006	TEST	12/2020	123	Pick up. Stolen card
DCL	30569309025904	TEST	12/2020	123	Insufficient funds
DCL	38520000023237	TEST	12/2020	123	Transaction not permitted to CH
JCB	3530111333300000	TEST	12/2020	123	Success
JCB	3566002020360505	TEST	12/2020	123	Pick up. Stolen card
AMEX	375700000000002	TEST	12/2020	1234	Success
AMEX	375118430910825	TEST	12/2020	1234	Success
AMEX	375118434896517	TEST	12/2020	1234	Pick up. Stolen card
AMEX	375118435530560	TEST	12/2020	1234	Insufficient funds
AMEX	375117436823644	TEST	12/2020	1234	Transaction not permitted to CH

Table 5.14. Values of <slipno> parameter

Parameter <slipno> is used for reconciliation of authorization reports from Assist and financial reports on compensation from the processing or acquiring bank.

Processing	Operation type	Value of <slipno> parameter, which is sent in Assist request	Example
UCS	Payment	The string is joined from the following parameters: <slipno from processing>, last four digits of the card number, ApprovalCode value	<slipno>1111114128X37308</slipno>
	On-line cancellation	no	<slipno></slipno>
	Partial cancellation	<slipno> value of payment	<slipno>1111114128X37308</slipno>
	Refund	The string is joined from the following parameters: <slipno>, last four digits of the card number	<slipno>1111114128</slipno>
	Financial transaction cancellation	The string is joined from the following parameters: <slipno>, last four digits of the card number, ApprovalCode value of payment	<slipno>1111114128X37308</slipno>
Multicard and Russian Standard	Payment	<slipno> value of processing	<slipno>11111111</slipno>
	On-line cancellation	no	<slipno></slipno>
	Partial cancellation	<slipno> value of payment	<slipno>11111111</slipno>
	Refund	New <slipno> value	<slipno>11222111</slipno>
Raiffeisenbank	Payment	RRN value	<slipno>533612014453</slipno>
	On-line cancellation	no	<slipno></slipno>
	Partial cancellation	<slipno> value of payment	<slipno>533612014453</slipno>
	Refund	<slipno> value of payment	<slipno>533612014453</slipno>
Other processings	All	no	<slipno></slipno>

Table 5.15. The validation rules for input parameters

Parameter name	Validation rule
All parameters except listed below	Symbols **<>"='/();#** are prohibited and removed
All parameters with *URL*	Symbols **"<,>,%3C,%3E"** are prohibited and removed, symbols **&&"** are changed to **&"**
Address, OrderComment	Symbols **"<>="** are prohibited and removed
OrderNumber	Symbols **"<>'";"** are prohibited and removed
Language, Currency, Country	Symbols **"<>"='/();#"** are prohibited and removed