

SOYUZTELECOM LLC

Specification of making crediting and refunds to the balance (mobile phone, bank cards, etc.) of physical persons

Description of the information exchange with Principal

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1. Changes history

Version	Date	Description
1.0	25.07.2015	Initial version.
1.1	09.10.2015	Error notification was deleted.
1.2	15.10.2015	Changes in codes in parameter providerCode.
1.3	18.11.2015	Changes in paragraph 10 «Get balance request».
1.4	26.11.2015	Added paragraph 11 «Accounting register».
1.5	22.03.2016	Corrections in «The procedure of information exchange» in paragraph 3. «Terms of Service»
1.6	19.07.2016	Deleted paragraph 4. «Variants of interaction with the Principal system». Added paragraph 4. «Making refund». Renamed paragraph 5 «Making crediting». Request confirmations were deleted from the infoexchange.
1.7	13.04.2017	Register format changed.

2. Introduction

This document describes the procedure of the information exchange between the parties to credit the funds to the balance (mobile phone, bank cards, etc.) of physical person. The information exchange is performed in real time using the http(s)-requests. The crediting of funds is initiated by the Principal. SOYUZTELECOM (ST) is executing the Principal order by receiving, processing and transferring the requests for crediting funds and is providing the results of the crediting to the Principal on request.

3. Terms of Service

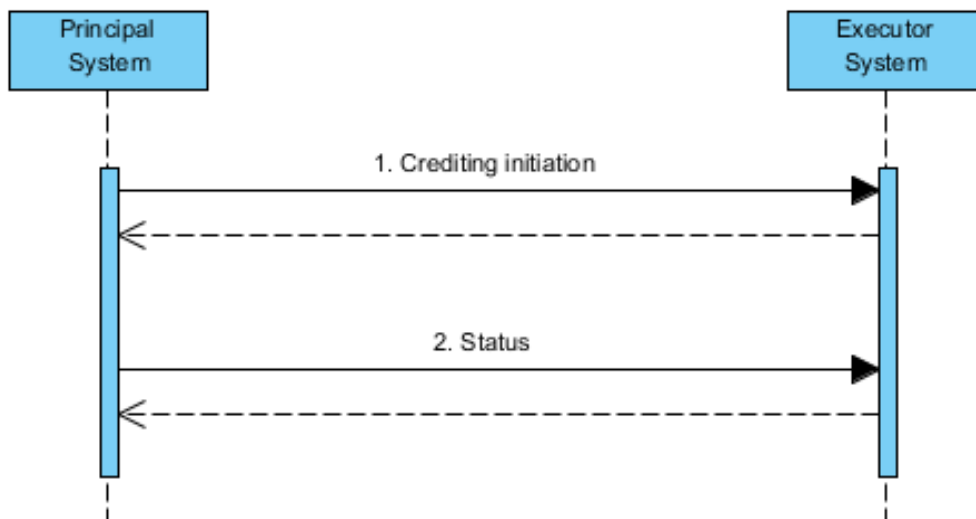
- The service is provided by the Executor to the Principal under the base of current bilateral agreement.
- The sum of the credited funds is limited by the advance the Principal has transferred to the Executor.
- The crediting is performed by the Executor on grounds of the Principal order. The Executor does not control the immediate initiator of the crediting at the Principal side. Such control lies on the Principal side.
- In the information exchange the Principal shall indicate the sum to be credited. Any middleman commissions (of Executor's partners) are charged in addition to each credit and the amount of the Principal advance will be diminished for the sum of commission. The Executor's commission shall be payed separately at the end of the reporting month (it does NOT diminish Principal's advance for the reporting month). The information about Executor's commissions and middleman's commissions specified in the Contract between Principal and Executor.

The procedure of information exchange:

- The requests are sent by POST method.
- Requests authentication is implemented by cryptographic combination of the secret word with request parameters (see details in Security requirements).
- SSL-authentication with client certificate can be claimed by the Principal.
- If Principal forms multiple requests of crediting the funds – all of them must be handled by separate requests between Principal and Executor.
- To avoid double crediting, you shall get the final status of the transaction before you try to credit it second time.
- In case you get any error during info exchange, if you receive code «-1» in response, if you get answer from system that is not listed in this document below, if you receive no answer from the system – you should first get the status of the transaction using «Status request» and only after that you can make a decision whether you can make another «Crediting initiation request».
- Successful receipt of «Making the crediting request» into possessing and response to it does not mean successful or unsuccessful crediting.
- You shall ask for the final crediting result using «Status request» to learn payment status.
- It is recommended to make «Status request» at intervals of 30 minutes.
- Daily in the interval of time from 23:55 to 00:05 a maintenance work is led at the settlement bank side. It is prohibited to make any requests during maintenance.

4. Making refund

4.1. Refund scheme



Status request can be made several times (until the final status is received).

4.2. Refund initiation

URI will be provided to the Principal during setting up the connection to the Executor system.

Parameter	Description	Required
user	Principal ID in the Executor system. Is given during setting up the connection.	yes
type	Request type – refund	yes
order	Unique request ID in the Principal system. String no more than 255 chars	yes
amount	Sum to be credited. Separator is dot. Number of digits in fractional part is two. Please, ask your manager to learn the limits applied to this parameter.	yes
destination	Credit destination code: «1», «034», «55» etc. Complete list of the 'destination' parameter can be acquired at the manager.	yes
params	String with the credit options in special format. Formats for different credit destinations can be acquired at the manager.	yes
mc	DCB or Cash in payment ID that is received from the ST system during the DCB or Cash in payment.	
date	Date/time (MSK) of the request. Format is YYYYMMDDHH24MISS	yes
control	Cryptographic convolution (see Security requirements)	yes, if two-way SSL-authentication not used

Executor's system checks the request for safety. In case of safety verifying failure, Executor's system send HTTP Status 404 in response to Principal's request.

In other cases Executor's system is forming an answer (response) in XML format, UTF-8 encoded (Content-type: text/plain):

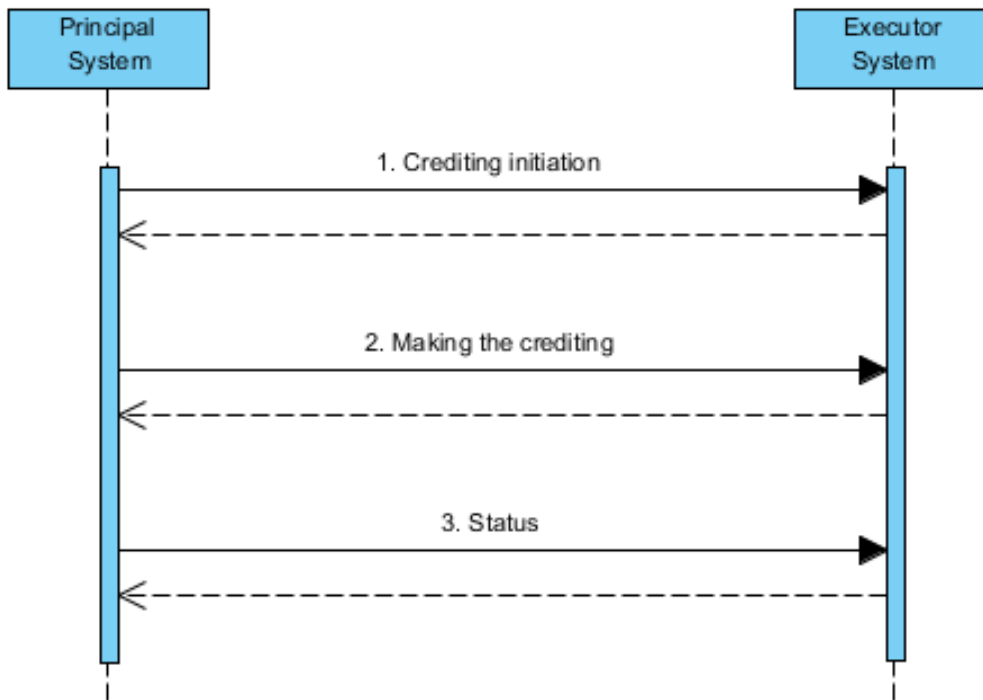
```

<?xml version="1.0" encoding="UTF-8"?>
<response>
  <processCode>processCode</processCode>
  <id>ID</id>
</response>
  
```

Parameter	Description	Required
processCode	Possible values: -1 Other error 0 Request accepted 1 Wrong user 2 Wrong parameter of request 4 Amount of DCB payment is less than requested refund. 5 Refund has been already executed. 6 DCB payment with such "mc" wasn't found in the ST system. 8 Payment amount exceeds allowed limit <i>Other error codes can be added in future versions of the Specification.</i>	yes
id	Unique ID of the request in the Executor system.	obligatory if processCode=0

5. Making crediting

5.1. Crediting scheme



Successful initiation at higher degree guaranties the correctness of payment details, sufficient funds, etc.

Status request can be made several times (until the final status is received).

5.2. Crediting initiation request

URI will be provided to the Principal during setting up the connection to the Executor system.

Parameter	Description	Required
user	Principal ID in the Executor system. Is given during setting up the connection.	yes
type	Request type – init	yes
order	Unique request ID in the Principal system. String no more than 255 chars	yes
amount	Sum to be credited. Separator is dot. Number of digits in fractional part is two. Please, ask your manager to learn the limits applied to this parameter.	yes
destination	Credit destination code: «1», «034», «55» etc. Complete list of the 'destination' parameter can be acquired at the manager.	yes
params	String with the credit options in special format. Formats for different credit destinations can be acquired at the manager.	yes
date	Date/time (MSK) of the request. Format is YYYYMMDDHH24MISS	yes
control	Cryptographic convolution (see Security requirements)	yes, if two-way SSL-authentication not used

Executor's system checks the request for safety. In case of safety verifying failure, Executor's system send HTTP Status 404 in response to Principal's request.

In other cases Executor's system is forming an answer (response) in XML format, UTF-8 encoded (Content-type: text/plain):

```

<?xml version="1.0" encoding="UTF-8"?>
<response>
  <processCode>processCode</processCode>
  <providerCode>providerCode</providerCode>
  <id>ID</id>
</response>
  
```

Parameter	Description	Required
processCode	Possible values: -1 Other error 0 Request accepted 1 Wrong user 2 Wrong parameter of request 8 Payment amount exceeds allowed limit <i>Other error codes can be added in future versions of the Specification.</i>	yes
providerCode	Possible values: -1 Internal error. 0 Success (request accepted). 1 Wrong parameters format. 2 Unsuccess. <i>Other error codes can be added in future versions of the Specification.</i>	Is sent if initiation confirmation request is NOT used. In this case parameter is obligatory if processCode=0
id	Unique ID of the request in the Executor system.	obligatory if processCode=0

5.3. Making crediting request

URI will be provided to the Principal during setting up the connection to the Executor system.

Parameter	Description	Required
user	Principal ID in the Executor system. Is given during setting up the connection.	yes
type	Request type – pay	yes
order	Unique request ID in the Principal system.	yes
amount	Sum to be credited. Separator is dot. Number of digits in fractional part is two. Please, ask your manager to learn the limits applied to this parameter.	yes
destination	Credit destination code: «1», «034», «55» etc. Complete list of the 'destination' parameter can be acquired at the manager.	yes
params	String with the credit options in special format. Formats for different credit destinations can be acquired at the manager.	yes
date	Date/time (MSK) of the request. Format is YYYYMMDDHH24MISS	yes
control	Cryptographic convolution (see Security requirements)	yes, if two-way SSL-authentication not used

Executor's system checks the request for safety. In case of safety verifying failure, Executor's system send HTTP Status 404 in response to Principal's request.

In other cases Executor's system is forming an answer (response) in XML format, UTF-8 encoded (Content-type: text/plain):

```
<?xml version="1.0" encoding="UTF-8"?>
<response>
  <processCode>processCode</processCode>
  <providerCode>providerCode</providerCode>
</response>
```

Parameter	Description	Required
processCode	Possible values: -1 Other error 0 Request accepted 1 Wrong user 2 Wrong parameter of request 7 Request is not registered in the system <i>Other error codes can be added in future versions of the Specification.</i>	yes
providerCode	Possible values: -1 Internal error. 0 Success (request accepted). 1 Payment in progress. 2 Unsuccess. <i>Other error codes can be added in future versions of the Specification.</i>	Is sent if initiation confirmation request is NOT used. In this case parameter is obligatory if processCode=0. Optional if processCode!=0

6. Refund / Crediting status request

URI will be provided to the Principal during setting up the connection to the Executor system.

Parameter	Description	Required
user	Principal ID in the Executor system. Is given during setting up the connection.	yes
type	Request type – status	yes
order	Unique request ID in the Principal system.	yes
id	Unique ID of the request in the Executor system that was sent in response to corresponding initiation request.	optional parameter If exists, it will be used to find the payment in the Executor system.
date	Date/time (MSK) of the request. Format is YYYYMMDDHH24MISS	yes
control	Cryptographic convolution (see Security requirements)	yes, if two-way SSL-authentication not used

Executor's system checks the request for safety. In case of safety verifying failure, Executor's system send HTTP Status 404 in response to Principal's request.

In other cases Executor's system is forming an answer (response) in XML format, UTF-8 encoded (Content-type: text/plain):

```
<?xml version="1.0" encoding="UTF-8"?>
<response>
  <processCode>processCode</processCode>
  <providerCode>providerCode</providerCode>
  <PaymDate>PaymDate</PaymDate>
</response>
```

Parameter	Description	Required
processCode	Possible values: -1 Other error 0 Request accepted 1 Wrong user 2 Wrong parameter of request 4 Amount of DCB payment is less than requested refund. 5 Refund has been already executed. 6 DCB payment with such "mc" wasn't found in the ST system. 7 Request not registered in the system 8 Payment amount exceeds allowed limit <i>Other error codes can be added in future versions of the Specification.</i>	yes
providerCode	Possible values: -1 Internal error. 0 Success (request accepted). 1 Payment in progress. 2 Unsuccessful. <i>Other error codes can be added in future versions of the Specification.</i>	obligatory if processCode=0
PaymDate	Date/time (MSK) of the credit. Format is YYYY-MM-DD HH24:MI:SS	obligatory if providerCode=0

7. Balance request

URI will be provided to the Principal during setting up the connection to the Executor system.

Parameter	Description	Required
user	Principal ID in the Executor system. Is given during setting up the connection.	yes
type	Request type – balance	yes
date	Date/time (MSK) of the request. Format is YYYYMMDDHH24MISS	yes
control	Cryptographic convolution (see Security requirements)	yes, if two-way SSL-authentication not used

Executor's system checks the request for safety. In case of safety verifying failure, Executor's system send HTTP Status 404 in response to Principal's request.

In other cases Executor's system is forming an answer (response) in XML format, UTF-8 encoded (Content-type: text/plain):

```

<?xml version="1.0" encoding="UTF-8"?>
<response>
  <processCode>0</processCode>
  <balances>
    <balance><error>0</error><destination>1</destination><amount>76.00</amount></balance>
    <balance><error>0</error><destination>55</destination><amount>153.00</amount></balance>
  </balances>
</response>

```

Parameter	Description	Required
processCode	Possible values: 0 request accepted 1 wrong user 2 wrong parameter of request <i>Other error codes can be added in future versions of the Specification.</i>	yes
balance	This tag includes parameters 'error', 'amount', 'destination' for each payment destination.	obligatory if processCode=0
error	Possible values: 0 request accepted. 1 request not processed. <i>Other error codes can be added in future versions of the Specification.</i>	obligatory if processCode=0
amount	Sum of funds on the account	obligatory if processCode=0
destination	Credit destination code: «1», «034», «55» etc. Complete list of the 'destination' parameter can be acquired at the manager.	obligatory if processCode=0

8. Accounting register

Daily at 03:00 (MSK) Executor uploads to the address specified in the Contract the accounting register file with all the successful payments made in the period from 00:00:00 to 23:59:59 (Moscow time) of the accounting day.

The registers are formed in CSV format in WINDOWS-1251 codepage and are packed in ZIP archive.
Delimiter in the register is semicolon «;»

By Principal request the register can be encrypted using PGP technology.

Register format

ORDER	ID	PAYMENT_ DATE	PARAMS	AMOUNT	DESTINATION	SETTLEMENT BANK FEE	AGENT FEE	SETTLEMEN T AMOUNT	SETTLEMEN T CURRENCY

Register description

Table field description:

Field name	Description
ORDER	Payment identifier in the Principal system.
ID	Payment identifier in the Executor system.
PAYMENT_ DATE	Date when the payment was made. Date format: «dd-mm-yyyy hh:MM:ss» (Example: 23-11-2015 14:03:55)
PARAMS	Subscriber phone number in case the payment was made to mobile phone. In case of payment to the bank card the field remains blank.
AMOUNT	Credited sum in rubles and kopecks. Separator is dot.
DESTINATION	Credit destination code. Complete list of the 'destination' parameter can be acquired at the manager.
SETTLEMENT BANK FEE	Settlement bank fee in rubles and kopecks. Separator is dot. Rounding to 2 digits in fraction.
AGENT FEE	Executor fee in rubles and kopecks. Separator is dot. Rounding to 2 digits in fraction.
SETTLEMENT AMOUNT	Credited sum including all fees in rubles and kopecks. Separator is dot.
SETTLEMENT CURRENCY	Payment currency.

Registers naming rules

Daily registers: [user]_[ddate]_[daily]

Monthly registers: [user]_[mdate]_[monthly]

where:

user – Principal identifier in Executor system. This value is given during setting up the connection.

ddate – date for which the register is formed. Date format: dd_mm_yyyy (Example: 23_11_2015)

mdate – month for which the register is formed. Date format: mm_yyyy (Example: 11_2015)

daily – daily register sign.

monthly – monthly register sign.

9. Security requirements

To ensure the security of information exchange the following is used:

- IP-addresses restriction;
- All the requests in the Executor's system are made using HTTPS protocol;
- HTTP protocol version – 1.1
- SSL version – TLSv1 or higher
- In case of safety verifying failure, Executor's system returns HTTP Status 404

Besides Principal can choose one of the following methods of protection the transmitted data:

- Two-way SSL-authentication (client and server certificates are checked during infoexchange)
 - using this type of security makes 'control' parameter optional;
- SHA1 / MD5-hash
 - in this case cryptographic convolution is formed from all the pairs of parameters names and parameters values, sorted alphabetically (by parameter name) and a secret word is added.
Example: (name1=value1+name2=value2+...+nameN=valueNsecret);
 - time of the request is checked: system checks if the time of request receipt differs from the time in 'date' parameter for no more than 5 minutes;
 - different secret words are used in Executor and Principal requests
- RSA-signature
 - cryptographic convolution is formed similarly to 'SHA1 / MD5-hash', but instead of secret words RSA-keys are used.