# **Switching Protocols: From commonHTTP-1.16 to commonHTTP-3.0**

This document described the changes in Yandex.Money’s commonHTTP-3.0 protocol as compared to the commonHTTP-1.16 protocol. All of the differences (*marked in red*) are laid out for the interaction model using the md5 hash for verification of payment parameters.

\* *We recommend using the more secure operating scheme based on PKCS#7. You can view a detailed description of both schemes in the 3.0 protocol description.*

## **An Example of an Interaction Session between the Online Store and Yandex.Money:**

1. The user completes the payment form and sends it to Yandex.Money (submit to the address http://money.yandex.ru/eshop.xml).

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| --- | --- | --- | --- |
| **commonHTTP-1.16 (before)** | | **commonHTTP-3.0 (after)** | |
| shopId  shopArticleId  Sum  BankId  scid  CustomerNumber  MyField | 13  456  87.1  1001  1643  8123294469  Field added by the store | shopId  shopArticleId  Sum  scid  CustomerNumber  *paymentType*  *shopSuccessURL*  *shopFailURL*  MyField | 13  456  87.1  1643  8123294469  *PC*  *http://www.domain.com/success/...*  *http://www.domain.com/fail/..*  Field added by the store |

\* *The field* ***paymentType*** *is not mandatory and is used to indicate payment method used to complete the user’s payment. If the payment parameter is omitted, by default the payment will be deducted from the user’s Yandex.Money account or the bank card linked to the user’s account. Detailed information about the parameter paymentType and the additional parameters related to it can be found in the protocol 3.0 description.*

\*\****shopSuccessURL*** *and* ***shopFailURL*** *in the payment form can be omitted if the store uses static web addresses that are given to Yandex.Money ahead of time.*

2. Using information from the payment form, Yandex.Money creates a contact, sends it to the user’s browser and waits for a response.

3. The user confirms the payment.

4. Yandex.Money sends the Online Store a request for verification of the payment parameters.

|  |  |
| --- | --- |
| **commonHTTP-1.16 (before)** | **commonHTTP-3.0 (after)** |
| requestDatetime=2011-07-21T14:20:06.000+04:00  action=Check  md5=8256D2A032A35709EAF156270C9EFE2E  shopId=13  shopArticleId=456  scid=1643  invoiceId=1234567  customerNumber=8123294469  orderCreatedDatetime=2011-07-21T14:20:04.000+04:00  orderSumAmount=87.10  orderSumCurrencyPaycash=643  orderSumBankPaycash=1001  shopSumAmount=86.23  shopSumCurrencyPaycash=643  shopSumBankPaycash=1001  paymentType=1  paymentPayerCode=4100175017397  orderIsPaid=0  MyField= Field added by the store | requestDatetime=2011-07-21T14:20:06.000+04:00  action=checkOrder  md5=8256D2A032A35709EAF156270C9EFE2E  shopId=13  shopArticleId=456  scid=1643  invoiceId=1234567  customerNumber=8123294469  orderCreatedDatetime=2011-07-21T14:20:04.000+04:00  orderSumAmount=87.10  orderSumCurrencyPaycash=643  orderSumBankPaycash=1001  shopSumAmount=86.23  shopSumCurrencyPaycash=643  shopSumBankPaycash=1001  paymentType=PC  paymentPayerCode=4100175017397  MyField= Field added by the store |

5. The Online Store confirms the validity of the payment.

|  |  |
| --- | --- |
| **commonHTTP-1.16 (before)** | **commonHTTP-3.0 (after)** |
| <?xml version="1.0" encoding="windows-1251"?>  <response  performedDatetime="2011-07-21T14:20:07+04:00">  <result code="0"  action="Check"  shopId="13"  invoiceId="1234567"/>  </response> | <?xml version="1.0" encoding="UTF-8"?>  <checkOrderResponse  performedDatetime ="2011-07-21T14:20:07.000+04:00"  code="0"  shopId="13"  invoiceId="1234567"/> |
| <?xml version="1.0" encoding="windows-1251"?>  <response  performedDatetime="2011-07-21T14:20:10+04:00">  <result code="100"  action="Check"  shopId="13"  invoiceId="1234567"  techMessage="Invalid amount"/>  </response> | <?xml version="1.0" encoding="UTF-8"?>  <checkOrderResponse  performedDatetime="2011-07-21T14:20:10.000+04:00"  code="2"  shopId="13"  invoiceId="1234567"  orderSumAmount="123.45"/> |
| <?xml version="1.0" encoding="windows-1251"?>  <response  performedDatetime="2011-07-21T14:20:10+04:00">  <result code="100"  action="Check"  shopId="13"  invoiceId="1234567"  techMessage="Invalid phone number"/>  </response> | <?xml version="1.0" encoding="UTF-8"?>  <checkOrderResponse  performedDatetime="2011-07-21T14:20:10.000+04:00"  code="100"  shopId="13"  invoiceId="1234567"  message="The specified phone number does not exist"  techMessage="Invalid phone number"/> |

\* *In 3.0, the character set* ***UTF-8*** is used by default *for text data of the message; the option of using the character set* ***win-1251*** *is still available.*

\*\* *In 3.0, the store can change the payment amount during payment verification by sending the response* ***code=2*** *and a different value for* ***orderSumAmount****. By default, the corresponding setting on Yandex.Money is not activated.*

\*\*\* *In protocol 3.0, when a store declines a payment, the store can show the user its own error text right on the Yandex.Money site (the value of the parameter* ***message****). By default, the corresponding setting on Yandex.Money is not activated.*

6. Yandex.Money accepts payment from the user.

7. Yandex.Money returns a page to the user’s browser containing a message about the success (or failure) of the payment. On this page, there is a button with the link “Back to the Store”, which leads to the page success(fail) url of the Online Store.

8. Yandex.Money notifies the Online Store that payment was successful.

|  |  |
| --- | --- |
| **commonHTTP-1.16 (before)** | **commonHTTP-3.0 (after)** |
| requestDatetime=2011-07-21T14:20:10.000+04:00  action=PaymentSuccess  md5=45125C95A20A7F25B63D58EA304AFED2  shopId=13  shopArticleId=456  scid=1643  invoiceId=1234567  customerNumber=8123294469  orderCreatedDatetime=2011-07-21T14:20:04.000+04:00  orderSumAmount=87.10  orderSumCurrencyPaycash=643  orderSumBankPaycash=1001  shopSumAmount=86.23  shopSumCurrencyPaycash=643  shopSumBankPaycash=1001  orderIsPaid=1  paymentDateTime=2011-07-21T14:20:10.000+04:00  paymentType=1  paymentPayerCode=4100175017397  MyField= Field added by the store | requestDatetime=2011-07-21T14:20:10.000+04:00  action=paymentAviso  md5=45125C95A20A7F25B63D58EA304AFED2  shopId=13  shopArticleId=456  scid=1643  invoiceId=1234567  customerNumber=8123294469  orderCreatedDatetime=2011-07-21T14:20:04.000+04:00  orderSumAmount=87.10  orderSumCurrencyPaycash=643  orderSumBankPaycash=1001  shopSumAmount=86.23  shopSumCurrencyPaycash=643  shopSumBankPaycash=1001  paymentDatetime=2011-07-21T14:20:10.000+04:00  paymentType=PC  paymentPayerCode=4100175017397  MyField= Field added by the store |

9. The Online Store confirms receipt of the notification of payment.

|  |  |
| --- | --- |
| **commonHTTP-1.16 (before)** | **commonHTTP-3.0 (after)** |
| <?xml version="1.0" encoding="windows-1251"?>  <response  performedDatetime="2011-07-21T14:20:13+04:00">  <result code="0"  action="PaymentSuccess"  shopId="13"  invoiceId="1234567"/>  </response> | <?xml version="1.0" encoding="UTF-8"?>  <paymentAvisoResponse  performedDatetime ="2011-07-21T14:20:13.000+04:00"  code="0"  shopId="13"  invoiceId="1234567"/> |

\* *Protocol 3.0 lets the Online Store decide what to do if notification of payment (paymentAviso) cannot be delivered. Corresponding payments can be marked failed (by default) or successful (determined by settings). Yandex.Money includes successful payments in the daily payment report and payment order to the counterparty’s address.*

## **Rules for Creating the md5 Hash:**

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| --- | --- | --- |
|  | **commonHTTP-1.16 (before)** | **commonHTTP-3.0 (after)** |
| **Parameter sequence** | orderIsPaid;orderSumAmount;orderSumCurrencyPaycash;orderSumBankPaycash;shopId;invoiceId;customerNumber;shopPassword | action;orderSumAmount;orderSumCurrencyPaycash;orderSumBankPaycash;shopId;invoiceId;customerNumber;shopPassword |
| **String** | 1;87.10;643;1001;13; 1234567;8123294469;s<kY23653f,{9fcnshwq | checkOrder;87.10;643;1001;13; 1234567;8123294469;s<kY23653f,{9fcnshwq |
| **Result** | 45125C95A20A7F25B63D58EA304AFED2 | 1B35ABE38AA54F2931B0C58646FD1321 |

\* *You can read more about creating and verifying the hash used for checking the payment parameters in the protocol 3.0 description*

## **Daily Payment Reports**

After an Online Store switches to the new protocol, daily reports on the payments accepted by Yandex.Money on behalf of the Online Store will continue to be delivered to the same email address is the same format as before.

## **Starting Work with the New Protocol**

After the Online Store works with Yandex.Money to test the new protocol in the demo environment, and the Store is ready to put the changes into production, the exact time of the switch will be agreed upon by both parties. Both parties will need to make the switch simultaneously.