



MERCHANT API INTEGRATION MANUAL

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Versions

Version	Date	Changes
2.3	January, 2014	Updated sequence diagram of the payment process flow New testing page screenshot – Appendix VI Added notification sample for Paysafecard payment – Appendix VII Added notification sample for Card payment – Appendix XI
2.4	February, 2014	Added Finland into supported countries – Appendix V
2.5	April, 2014	Updated format of REF parameter (Char(500) except "<", ">")
2.6	May, 2014	Added note regarding CZK and HUF currencies – Appendix III
2.7	June, 2014	Manual updated due to changes in the distribution of secret key Added new secret key appendix - Appendix XII
2.8	August, 2014	Added Greece into supported countries – Appendix V Updated information regarding successful payment result codes – Appendix II
2.9	November 21, 2014	Changed base "TEST" URL for test environment – see Appendix VI, Transaction country of origin identification – see page 16. and new Appendix XIII – GetTransactionOrigin, Updated Appendix II – added result codes 1010 and 1011, chapters numbering changed.
2.9.1	December 4, 2014	Typo in Appendix XIII corrected – GetTrasnactionOrigin renamed to GetTransactionOrigin
2.10	January 12, 2015	Appendix III - PLN currency removed Appendix V - country Poland removed
2.11	March 9, 2015	Appendix III – changed supported currencies: added DKK, removed HRK Appendix V – changed supported countries: added DK, removed HR Appendix VI – info about unsupported self-signed certificates added. Payment process, Appendix VI & Appendix VIII - Removed old URLs for test environment.
2.12	April 21, 2015	Updated notification IP addresses for test and live environment
2.13	May 25, 2015	Appendix III – changed supported currencies: added SEK Appendix V – changed supported countries: added SE Updated email notification IP adresses
2.14	November 11, 2015	Removed Appendix Paysafecard Removed Appendix Internal Transfer Removed Appendix FAQ Appendix III – GBP currency removed Appendix IV – Turkish language added Appendix II – removed result code 1009 PaySafeCard timeout
2.15	January 27, 2016	Removed supported currencies: BGN, RON, DKK, SEK, NOK

		Removed supported countries: Bulgaria, Romania, Denmark, Sweden, Norway, Finland, Greece
2.16	March 14, 2016	Execution of test payments is no longer required

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Introduction

The Trust Pay (TP) Merchant API (payment service) is an internet based payment tool that Merchants can use to receive payments from clients. This tool includes four basic payment methods:

1. Card payments via VISA and MasterCard branded cards.
2. Bank transfers

This manual should help implement and integrate the Trust Pay Merchant API into Merchants' e-commerce portal and ensure a functional and secure connection between Trust Pay's server and the Merchant's server. It is intended to be used by technical staff maintaining the Merchant's website.

When a Merchant wants to implement the TP payment service on his page, the following required procedure must be followed:

1. Merchant must sign an agreement with Trust Pay and fulfill all other legal and business requirements, details of which are out of scope of this document.
2. (Optional) Merchant provides the necessary data for the TEST environment:
 - **Success Return URL** (required)
default address of page, where client will be redirected after a successful payment.
 - **Error Return URL** (required)
default address of page, where client will be redirected when an error has occurred.
 - **Cancel Return URL** (required)
default address of page, where client will be redirected if user cancels the payment.
 - **Notification URL** (required)
address of page where the Merchant wants to receive payment notifications through the HTTP protocol.
 - **Notification E-mail address** (optional)
e-mail address where the Merchant wants to receive payment notifications by e-mails.
3. (Optional) Merchant receives test data. This data is created exclusively for integration testing purposes and works only in the test environment, not the production environment:
 - **One test environment PID**
required to log in to Trust Pay's internet banking on the test environment in order to generate a secret key for your test environment accounts. For more information - see Appendix XII
 - **Test account numbers for one currency (EUR)**
IDs of accounts on the test environment enabled for payments (used as AID parameter).
4. Merchant implements the necessary changes on his website, according to this document.
5. (Optional) Merchant executes a few API payments on these test accounts in order to verify the integration.
6. Merchant contacts Trust Pay with a request to enter the production state.

7. Trust Pay asks the merchant to provide the following data prior to entering the PRODUCTION state:
 - **Success Return URL** (required)
 - **Error Return URL** (required)
 - **Cancel Return URL** (required)
 - **Notification URL** (required)
 - **Notification E-mail address** (optional)
8. Trust Pay processes the received data and provides the following production environment data to the merchant:
 - **Production environment PID**
required to log in to Trust Pay's internet banking on the production environment in order to generate secret keys for your production environment accounts. For more information - see Appendix XII
 - **Requested account numbers**
IDs of accounts enabled for payments (used as AID parameter).
9. Merchant can now enter the production (LIVE) environment by applying new settings based on the production environment data received from Trust Pay – see Appendix X

Payment process

Trust Pay requires the Merchant to modify their payment/checkout page to include payment options offered by Trust Pay. When the customer selects Trust Pay as a payment method, he is actually sending data to Trust Pay's secure web servers. Sent data contains information about the payment, such as the Merchant's account, amount to be paid and several other fields that control the behavior of Trust Pay's Payment Gateway.

The following chapter describes primarily the "bank transfer" solution of Trust Pay, however it also provides a common base for all other payment options available through Trust Pay.

Payment option selection (Card payment / Bank transfer / ...) needs to be implemented on merchant's site / application. Once the customer is redirected to Trust Pay, he is not able to change the payment option without returning to the merchant's site.

Here is a simple sequence diagram of the payment process flow.

Merchant redirects client to Trust Pay

Using the SIG parameter allows the Merchant to verify data integrity. Based on the SIG parameter presence the requests can be categorized as follows:

- **Normal request**

SIG parameter is not present. In this case parameters REF and AMT are treated specially.

- a. **REF**

If REF is present (sent from Merchant) it cannot be changed.

If REF is not present, user must fill in the Reference field at the Trust Pay site.

- b. **AMT**

If AMT is present (sent from Merchant) it cannot be changed.

If AMT is not present, user must fill in AMT at Trust Pay site.

- **Secure request**

SIG parameter is present - no changes in the AMT and REF parameter values are possible.

Merchant's implementation has to redirect the client to the Merchant API with the following parameters.

Name	Description	Format	Required	Example
AID	Merchant account ID ID of account assigned by Trust Pay	Varchar(10)	Yes	1234567890
AMT	Amount of the payment exactly 2 decimal places	Decimal(13, 2) en-US format	For secure requests	1234.00
CUR	Currency of the payment same as currency of merchant account See Appendix III	Char(3)	Yes	EUR
REF	Reference Merchant's payment identification	Char(500) except "<", ">"	For secure requests	ORDER9876543210
URL	Return URL overrides any default Return URL , can be overridden further by RURL,CURL,EURL	Varchar(256)	No	http://www.merchant.com/TrustPayReturn.html
RURL	Return URL overrides default Success Return URL	Varchar(256)	No	http://www.merchant.com/TrustPayReturn.html
CURL	Return URL overrides default Cancel Return URL	Varchar(256)	No	http://www.merchant.com/TrustPayCancel.html
EURL	Return URL overrides default Error Return URL	Varchar(256)	No	http://www.merchant.com/TrustPayError.html
NURL	Notification URL overrides default Notification URL	Varchar(256)	No	https://www.merchant.com/TrustPayNotification.html
SIG	Data sign see Appendix I	Char(64)	For secure requests	F3E74F2204C2D187

				DD303CF0C5B22CE4 1DEB8FA0C1F18356 C05DA0F8DAFF5B69
LNG	Language default language for Trust Pay site see Appendix IV	Char(2)	No	en
CNT	Country default country of client see Appendix V	Char(2)	No	SK
DSC	Description free text that will be displayed to the user	Varchar(256)	No	Payment for Order XYZ
EMA	Customer email prefills the email address fields for the customer when redirected to Trust Pay	Varchar(254)	No	email@gmail.com

The base "Production" URL for client redirect is: <https://ib.trustpay.eu/mapi/pay.aspx>

The new base "TEST" URL for client redirect is: <https://ib.test.trustpay.eu/mapi/pay.aspx>.

There are 2 types of redirect:

- **LINK**
parameters are sent directly in link as a query string
- **FORM**
parameters are sent using FORM

LINK

All parameters are sent in a query string and their values must be URL encoded (according to RFC 1738).

Example of the LINK:

```
<A href="https://ib.trustpay.eu/mapi/pay.aspx?AID=9876543210&AMT=100.50&CUR=EUR&REF=1234567890&SIG=F3E74F2204C2D187DD303CF0C5B22CE41DEB8FA0C1F18356C05DA0F8DAFF5B69">Pay with TrustPay</A>
```

FORM

The parameters should be inserted on the merchant page as INPUT fields with type HIDDEN. The form can have set the METHOD parameter to POST or GET. Encoding of form should be set to default **application/x-www-form-urlencoded**.

Example of the FORM with the hidden parameters:

```
<FORM name="form1"
  action="https://ib.trustpay.eu/mapi/pay.aspx "
  method="POST">
<INPUT type="hidden" name="AID" value="9876543210" />
<INPUT type="hidden" name="AMT" value="100.50" />
<INPUT type="hidden" name="CUR" value="EUR" />
<INPUT type="hidden" name="REF" value="1234567890" />
<INPUT type="hidden" name="SIG"
  value="F3E74F2204C2D187DD303CF0C5B22CE41DEB8FA0C1F18356C05DA0F8DAFF5B69"/>
<INPUT type="submit" name="Pay with TrustPay" />
</FORM>
```

NOTE: In case your request parameter values are not being decoded correctly on the payment site, make sure you are using UTF-8 encoding.

TrustPay notifies Merchant about payment

For each announced, authorized, or successfully finished payment on the Merchant's account, TrustPay sends the result of the payment to the Merchant in notification URL (email) using the following parameters:

Name	Description	Format	Example
AID	Merchant account ID ID of account assigned by TrustPay	Varchar(10)	1234567890
TYP	Type of transaction CRDT or DBIT	Char(4)	CRDT
AMT	Amount of the payment Exactly 2 decimal places	Decimal(13, 2)	123.45
CUR	Currency of the payment See Appendix III	Char(3)	EUR
REF	Reference Merchant's payment identification	Char(500) except "<", ">"	9876543210
RES	Result code See Appendix II	Number(4)	0
TID	TrustPay Transaction ID unique ID used for any enquiries	Number(10)	9876543210
OID	TrustPay Order ID ID of payment order (0 if no order available)	Number(10)	1122334455
TSS	Transaction signed If request from merchant was signed, this value determines, whether real payment was done with same signed values as specified by merchant.	Char(1)	Y – Yes, N – No
SIG	Data sign see Appendix I	Char(64)	F3E74F2204C2D187 DD303CF0C5B22C E4 1DEB8FA0C1F1835 6 C05DA0F8DAFF5B6 9

All parameters are always present.

NOTE: VERIFY PARAMETERS TSS AND AMOUNT. In some cases (such as offline payment) user can send different amount. TrustPay will process such payment to your account and will send notification with amount processed to your account.

Notifications can be sent to the Merchant using the following channels:

- HTTP**

all parameters are sent as a HTTP query string to **Notification URL** provided by the Merchant. Script at this URL should return HTTP status **200 OK** on success or **500 Internal error** otherwise. TrustPay will repeat notification every 5 minute until 200 OK is received within 75 hours (900 attempts).

Notification requests from Production environment are sent from IP 176.31.175.45

Notification requests from Test environment are sent from IP 151.80.116.200

Sample:

<http://www.merchant.com/result.html?AID=1234567890&TYP=CRDT&AMT=123.45&CUR=EUR&REF=9876543210&RES=0&TID=11111&OID=1122334455&TSS=Y&SIG=F3E74F2204C2D187DD303CF0C5B22CE41DEB8FA0C1F18356C05DA0F8DAFF5B69>

- **E-mail**

an e-mail in text/plain format is sent to **email** provided by merchant. The message consists of:

- From – TrustPay IB [tpnotify@trustpay.eu]
- Subject – Notification – Reference: {REF}
- Body – all parameters in format "parameter name: value", each parameter on new row

E-mails delivered from Production environment are sent from one of the following IPs:
 81.89.63.10, 46.229.226.247

E-mails delivered from Test environment are sent from IP: 217.73.23.110

After signing an agreement, the Merchant can choose through which of the channels he would like to receive payment notifications. Notifications are not sent for failed payments.

TrustPay redirects client to Merchant

After finishing this process, the customer is redirected (according to the result), to one of the return URLs provided by the Merchant.

- **Success Return URL**

user is redirected here in case of an announced or authorized or a successful payment with RES = 0
 or in case of a timed out pending payment with RES=1.

Redirect to the success return URL – does not mean that merchant has received the payment. Only the notification URL (or email if defined) is used for informing the merchants about realized payment.

- **Cancel Return URL**

user is redirected here in case he decides to cancel the payment with RES=1005.

- **Error Return URL**

user is redirected here in case of a failed or refused payment with RES >= 1000 and RES!=1005.

The following parameters are always being sent with the redirects:

Name	Description	Format	Example
REF	Reference Merchant's payment identification	Char(500) except "<", ">"	9876543210
RES	Result code See Appendix II	Number(4)	0
PID	Processing ID (optional) Sent when available, can be used for inquiries regarding failed payments	Number(10)	1234568790

NOTE: DO NOT PERFORM ANY ACTION ON THIS REDIRECT. Data is not signed and therefore cannot be considered as a verified payment result, such as the signed results sent to **Notification URL** or **Notification Email**.

In case of result 1 (PENDING) in redirection to merchant, notification will come only if user really makes the payment.

Additional information for merchants

Transaction country of origin identification

From the 1st of January 2015, the European Union VAT changes to the place of supply of electronic services will enter into force. The place of taxation for natural persons (non-taxable customers) will be determined by the location of the end consumer, and digital supplies will be taxed at the VAT rate applicable in the consumer's member state.

For the purpose of applying the rules in Article 58 of Directive 2006/112/EC and fulfilling the requirements of point (d) of Article 24b or Article 24d(1) of the COUNCIL IMPLEMENTING REGULATION (EU) No 1042/2013, the following evidence shall be provided by TrustPay where available:

- *the Internet Protocol (IP) address of the device used by the customer or any method of geolocation;*
- *bank details such as the location of the bank account used for payment or the billing address of the customer held by that bank;*

1. Internet Protocol address

Based on regularly updated GeoIP data the country is derived from the IP address of the customer visiting Trust Pay's payment site located at <https://ib.trustpay.eu/mapi/...>

This information is only available for payments executed through Trust Pay's payment site. Direct payments, white-label solutions and customer repeated payments avoid the payment site, thus the IP is unknown to TrustPay in these scenarios. For payments made through Trust Pay's payment site, this evidence is available instantly.

2. Bank details

TrustPay provides two evidences (where available) regarding the banks used for payments, those being country based on payer's account and country based on the account where TrustPay has been credited with the transaction.

Two of the following evidences can only be taken to constitute a single item of evidence as they are all related to the bank location. In case both are available and should they differ, adhere to the following rule when determining the country.

In order to determine the country based on bank, use the first available in the following order:

1. Payer's bank country
2. Payee's bank country

2.1. Payer's bank country

By being able to identify the counterparty account, TrustPay can provide the evidence based on the location of the bank where the account is open.

This information is available if provided by counterparty. This information may not be available instantly upon receiving a payment.

2.2. Payee's bank country

In some cases however, TrustPay does not have access to information regarding the counterparty account. In order to provide at least some information to be able to determine the customer's country, TrustPay will provide the country where the funds have been received. As the aim of the involved parties (merchant, customer, TrustPay) is to execute a payment that

is credited without any delay to the merchant, one can assume that the customer will be making an intra-bank or at least a domestic payment.

This information is available for each received payment instantly.

For technical solution see [Appendix XIII - GetTransactionOrigin](#).

Appendix I - Creating data sign

HMAC-SHA-256 (RFC 2104) code is used for checking the integrity of the data sent between TrustPay and Merchant. Sign creation flow:

- A message is created as concatenation of parameter values in this specified order:
 - Merchant redirect to TrustPay: AID, AMT, CUR, and REF
 - TrustPay notification to Merchant: AID, TYP, AMT, CUR, REF, RES, TID, OID and TSS
 - Transaction country of origin identification request: AID, TID
 - Transaction country of origin identification response: whole xml without Signature tag with redundant white-spaces removed.
- HMAC-SHA-256 code (32 bytes) is generated using a key obtained from TrustPay (please see [Appendix XII.](#))
- Then the code is converted to a string to be a hexadecimal representation of the code (64 upper chars)..

Code samples

Test your sign computing implementation using the following data:

key	abcd1234
AID	9876543210
AMT	123.45
CUR	EUR
REF	1234567890
SIG	DF174E635DABBFF7897A82822521DD739AE8CC2F83D65F6448DD2FF991481EA3

Here we provide examples of code computing SIG in some major programming languages.

.NET framework 2.0 (C#)

```
public static string GetSign(string key, string message){
    System.Security.Cryptography.HMAC hmac =
        System.Security.Cryptography.HMAC.Create("HMACSHA256");
    hmac.Key = System.Text.Encoding.UTF8.GetBytes(key);
    byte[] hash = hmac.ComputeHash(System.Text.Encoding.UTF8.GetBytes(message));
    return BitConverter.ToString(hash).Replace("-", "").ToUpperInvariant();
}
```

PHP

```
function GetSign($key, $message){
    return strtoupper(hash_hmac('sha256', pack('A*', $message), pack('A*', $key)));
}
```

JAVA

```
public static String GetSign(String key, String message) throws Exception{
    javax.crypto.Mac mac = javax.crypto.Mac.getInstance("HmacSHA256");
    byte[] keyBytes = key.getBytes("UTF-8");
    System.out.println("Key bytes: " + ByteArray2HexString(keyBytes));
    byte[] messageBytes = message.getBytes("UTF-8");
    System.out.println("Message bytes: " + ByteArray2HexString(messageBytes));
    mac.init(new javax.crypto.spec.SecretKeySpec(keyBytes,
        mac.getAlgorithm()));
    return ByteArray2HexString(mac.doFinal(messageBytes));
}
```

```
public static String ByteArray2HexString(byte[] b){
    java.math.BigInteger bi = new java.math.BigInteger(1, b);
    return String.format("%0" + (b.length << 1) + "X", bi);
}
```

Appendix II - Result codes

List of result codes returned by TrustPay to Merchant (either to **Error Return URL** or **Notification URL**).

Please be informed that only Result codes 0, 3 or 4 can be treated as a successfully executed payment which has been or is guaranteed to be credited to Merchant's account in TrustPay.

For card payments result codes, please see Appendix IX

Code	Description	Returned via
0	Success Payment was successfully processed. When received in notification, funds have been credited to the merchant account. Merchant can provide goods or services without delay.	redirect email notification http notification
1	Pending Payment is pending (offline payment)	redirect
2	Announced TrustPay has been notified that the client placed a payment order or has made payment, but further confirmation from 3 rd party is needed. Another notification (with result code 0 - success) will be sent when TrustPay receives and processes payment from 3 rd party. Funds have not been credited to the merchant account and there is no guarantee they will be.	email notification http notification
3	Authorized Payment was successfully authorized. Another notification (with result code 0 - success) will be sent when TrustPay receives and processes payment from 3 rd party. For card payments (see Appendix IX), funds will be credited to the merchant account of the merchant in a bulk payment on the next settlement day. For other payments, funds will be credited to the merchant account, at a later date. Merchant can provide goods or services without delay.	email notification http notification
4	Processing TrustPay has received the payment, but it must be internally processed before it is settled on the merchant's account. When the payment is successfully processed, another notification (with the result code 0 – success) will be sent. Funds will be credited to the merchant account, at a later date.	email notification http notification
5	AuthorizedOnly – reserved for future use Card payment was successfully authorized, but not captured. Subsequent MAPI call(s) is (are) required to capture payment.	redirect email notification http notification
1001	Invalid request Data sent is not properly formatted	redirect
1002	Unknown account Account with specified ID was not found. <i>Please check if you are using correct account number – AID.</i>	redirect
1003	Merchant account disabled Merchant account has been disabled	redirect
1004	Invalid sign The message is not signed correctly	redirect

1005	User cancel Customer has cancelled the payment	redirect
1006	Invalid authentication request was not properly authenticated	redirect
1007	Disposable balance Requested transaction amount is greater than disposable balance	redirect
1008	Service not allowed Service cannot be used or permission to use given service has not been granted. <i>If you receive current code, please contact TrustPay for more information.</i>	redirect
1010	Transaction not found Transaction with specified ID was not found	redirect
1011	Unsupported transaction The requested action is not supported for the transaction	redirect
1100	General Error Internal error has occurred	redirect
1101	Unsupported currency conversion Currency conversion for requested currencies is not supported	redirect

If there is a need to contact TrustPay because some error occurred, please send to TrustPay printscreens and URL link with parameters (GET or POST).

Appendix III – Supported currencies

The following is a list of currencies (according to ISO 4217) supported by TrustPay.

Code	ID	Name
CZK	203	Czech koruna
EUR	978	Euro
HUF	348	Forint
TRY	949	Turkish lira
USD	840	US Dollar

NOTE: For the currencies CZK and HUF remember to use integers only in payment requests (but they still have to be formatted with exactly two decimal places, e.g. "1234.00"). Using fractional parts might result in the inability of your customers to pay the amount you requested.

Appendix IV – Supported languages

The following is a list of languages (according to ISO 639-1) supported by TrustPay.

Code	Language	Supported for bank payments	Supported for card payments
bg	Bulgarian	Yes	No
bs	Bosnian	Yes	No
cs	Czech	Yes	Yes
de	German	No	Yes
en	English	Yes	Yes
es	Spanish	No	Yes
et	Estonian	Yes	No
hr	Croatian	Yes	Yes
hu	Hungarian	Yes	Yes
it	Italian	No	Yes
lt	Lithuanian	Yes	No
lv	Latvian	Yes	No
pl	Polish	Yes	Yes
ro	Romanian	Yes	Yes
ru	Russian	Yes	Yes
sk	Slovak	Yes	Yes
sl	Slovene	Yes	Yes
sr	Serbian	Yes	No
tr	Turkish	Yes	No
uk	Ukrainian	No	Yes

Appendix V – Supported countries

The following is a list of customer countries (according to ISO 3166-1 alpha-2) supported by TrustPay.

Code	Country
CZ	Czech Republic
EE	Estonia
HU	Hungary
LT	Lithuania
LV	Latvia
SI	Slovenia
SK	Slovak Republic
TR	Turkey

Appendix VI – Testing of bank payments

After successful implementation of the TrustPay API, the Merchant can test all return values depending on the results of the payment transactions.

Secure communication using self-signed certificates isn't supported by Trust pay. Please use certificates issued by a certification authority.

Redirecting the client's browser to <https://ib.test.trustpay.eu/mapi/pay.aspx> will display Trust Pay's following page.

The screenshot displays the TrustPay payment gateway interface, divided into three numbered steps:

- Step 1: Confirm payment details:** Shows the recipient as **www.shoptrustpay.sk**, the amount as **1.00 EUR**, and the order ID as **4363**.
- Step 2: Select your bank by clicking on its logo:** Displays a list of banks for Slovakia. The **TrustPay** bank logo is highlighted with a yellow circle.
- Step 3: Pay now:** Shows a "Pay now" button highlighted with a green circle. Below it, a note states: "You will be redirected to the bank's payment page. After completing the payment, please, do not leave the site until you are redirected back to the merchant's site."

The footer of the page includes the TrustPay logo and copyright information: © TrustPay, a.s. Za kasárníou 1, 83103 Bratislava, Slovakia.

On the second step select the country **"Slovakia"** in the "Currently listing banks for" field when using a EUR test account. For tests with accounts in currencies different than EUR, select a country with the account currency as domestic currency. Then click on the **"TrustPay" bank**. In the third step, click the **"Pay now"** button.

Note: The **TrustPay** bank is a virtual instant payment Gateway used only for testing purposes.

You will then be redirected to the **"TestPay"** gateway page where you can choose one of the following actions:

Payment gateway: Test Pay
Amount: 3.75
Reference: 4377600239

☒ Redirect to MAPI

- OK – Payment from Instant transfer will be paid and client will be redirected to SUCCESS RETURN URL with result RES=0. TrustPay then call NOTIFICATION URL (required) or send NOTIFICATION EMAIL (optional), depending on Merchant's configuration.
- ANNOUNCED – This emulates situation when TrustPay receives notification about payment from 3rd party but payment was not processed yet. If "Redirect to MAPI" checkbox is checked, you will be redirected to SUCCESS RETURN URL and you will receive only one notification with result 2. You can uncheck this checkbox, click ANNOUNCED button to receive announced notification. Later, you can click OK button to receive another notification for same payment with result 0. This emulates production environment scenario for some gateways.
- FAIL – Payment from Instant transfer will be failed and client will be redirected to ERROR RETURN URL with result value RES defined in error code table "Appendix II".
- PENDING – Payment from Instant transfer will be pending. Client will be redirected to SUCCESS RETURN URL with result RES=1 which means "Payment pending". TrustPay will wait for acknowledgment from Bank or third-party payment system and then call NOTIFICATION URL or send NOTIFICATION EMAIL, depending on Merchant's configuration.

Note: The Reference value in the TestPay gateway is for Trust Pay's internal use only.

Appendix VII – Card payments*

Visa and MasterCard card payments work in a way similar to bank transfers (Chapter Payment process), with the differences described in this appendix.

Successful notifications are sent with the result code 3 – authorized, which also mean that the payment has been captured. All payments in an agreed period will be settled later with a single transaction; therefore you will not receive any further notifications for the individual card transactions.

Requests

The base “Production” URL for client redirect for the card payment is:

<https://ib.trustpay.eu/mapi/cardpayments.aspx>

All other parameters work as described in the chapter Payment process with the following limitations:

- Only characters a-z, A-Z, 0-9 and space character of parameter DSC (description) are displayed to a customer (payer) on the payment page. Other characters are changed to ' ' (space). Max DSC length is Char(256)
- REF allowed format is Alphanumeric(19) - only first 19 characters of the REF parameter are stored by TrustPay for later support inquiries.
- AMT allowed format is Decimal(6, 2)
- EMA allowed format is Char(32)

In the return redirect URL the result code 0 is passed for successful authorization, otherwise you will receive error codes in the ranges 600-700 and 2000-3000. These error codes are reserved for card payments. Please contact TrustPay support at support@trustpay.eu if you received an error.

Notification

Card payment notifications have following parameters in addition to the bank transfer notification:

Name	Description	Format	Example
CardID	ID of card payment, reserved for future versions	Number (36)	1234567892221111
CardMask	Masked card number	Char (19)	444433*****1111
CardExp	Card expiration as MMY	Number(4)	1215
AuthNumber	Authorization number	Char(7)	0123456
CardRecTxSec	blank, reserved for future versions	Char(1)	J
AcqResId	Card Acquirer Response ID	Char(128)	8418184894
SIG2	signature containing standard notification data and card payment specific data	Char(64)	FC5C07FC0340DC 10EA7F5AF4CB677 07B5F401240E00D7 821DA8681A1A9D7 22B4

SIG2 is computed from the following values:

AID, TYP, AMT, CUR, REF, RES, TID, OID, TSS, CardID, CardMask, CardExp, AuthNumber, CardRecTxSec, AcqResId

NOTE: parameter SIG is also send for the backward compatibility as described in appendix I.

Sample:

http://www.merchant.com/result.html?type=notification&AID=2107425307&TYP=CRDT&AMT=33.00&CUR=EUR&REF=1234567890&RES=3&TID=140344&OID=0&TSS=N&CardID=1030241464051111&CardMask=444433*****1111&CardExp=0313&AuthNumber=0548393&AcqResId=306514140344&CardRecTxSec=&SIG=59DD8954B7372B6BCB627264E770875B13DD68201699FA92B99DE91D666645D4&SIG2=5FBBBE81D7F1A29133C40F94333F1D21F71D6CBBEC1BFA919164C7727B8AE0A2

Testing of card payments can be done on the bank transfer test page (as described in Appendix VI.) and is limited only to testing of the authorization notification by using of the TrustPay Authorization gateway (with OK button).

**This option is enabled only for those merchants, who have an agreement with TrustPay for card payments (stated as TrustCard service in the agreement). An error message will be shown to all other merchants.*

There is additional API manual available for card payments “Merchant API Integration manual Card Payments Extension”, which describes card-on-file transactions, recurring card transactions, refunds and preauthorization.

Appendix VIII – Entering the PRODUCTION state (LIVE environment)

In order to test the implementation of TrustPay on merchant's site, each merchant receives access to the TEST environment. After the process of implementation is over, the merchant contacts TrustPay and requests access to the PRODUCTION (Live) environment.

The base "Production" URL for client redirect is: <https://ib.trustpay.eu/mapi/pay.aspx>

After TrustPay verifies that the implementation was successful, the merchant will receive new – production state data. The previously received data, was valid for the TEST environment only. The production state data includes:

- **PID**
- **AIDs**

It is necessary to use the live **Secret keys** for the PRODUCTION (Live) environment in order to generate correct signs. Secret key is available and can be generated by merchant in Trust Pay's Internet banking under Settings / Accounts settings – for more information see Appendix XII.

Please, do not forget to change the base URL for client redirect to the PRODUCTION URL and make sure the implementation is configured with production state data after entering the live environment.

Please, make sure you use the **test secret keys** in the test environment.

Please, make sure you use the **live secret keys** in the production (live) environment.

Using data valid for the TEST environment will cause payment failures or unexpected payment results (payments not being signed) in the LIVE environment.

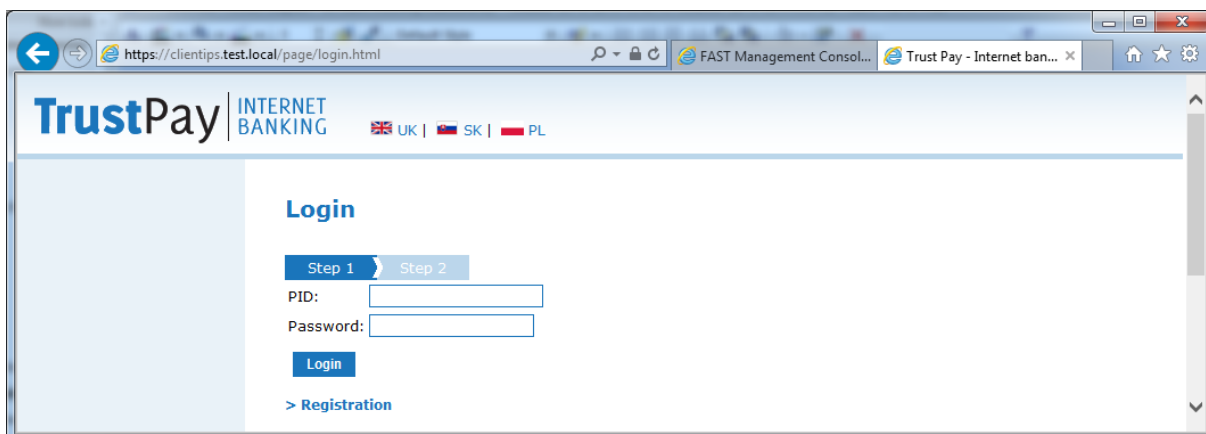
Appendix IX – Secret key

A secret key is required for signing of payment data (used when generating the SIG parameter).

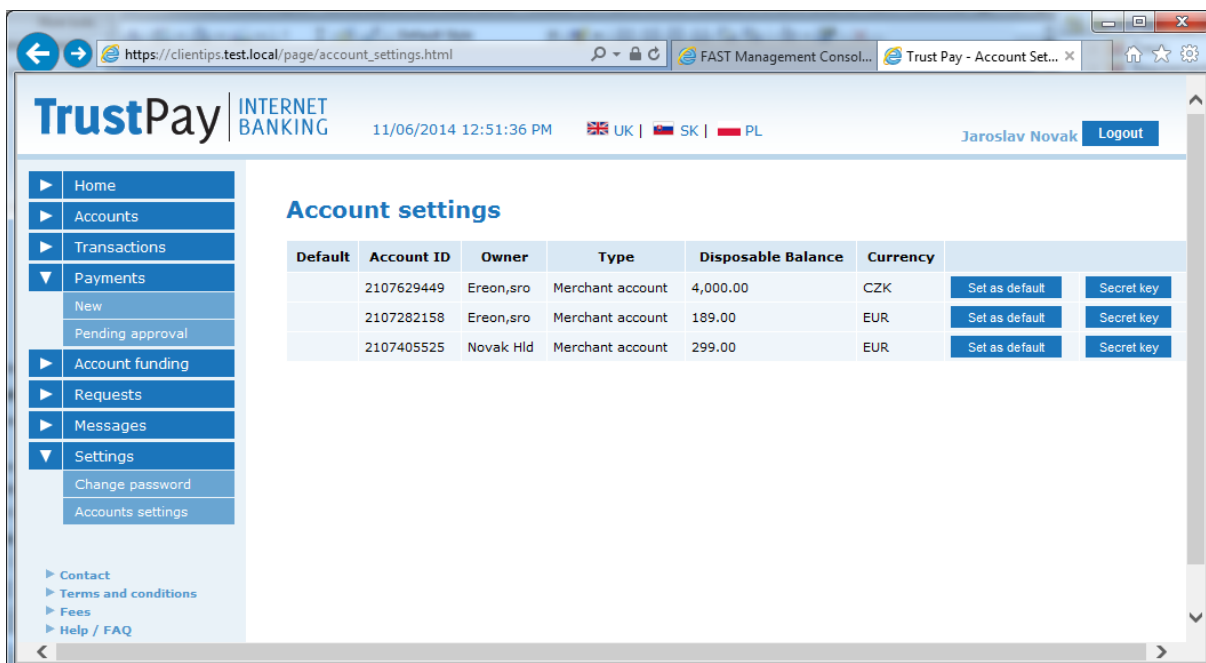
Each merchant's account ID in TrustPay has its own secret key. A new secret key can be generated for a given account by an active disponent.

To access or generate a new secret key, follow the steps below:

1. Log in to TrustPay Internet banking with your PID and password

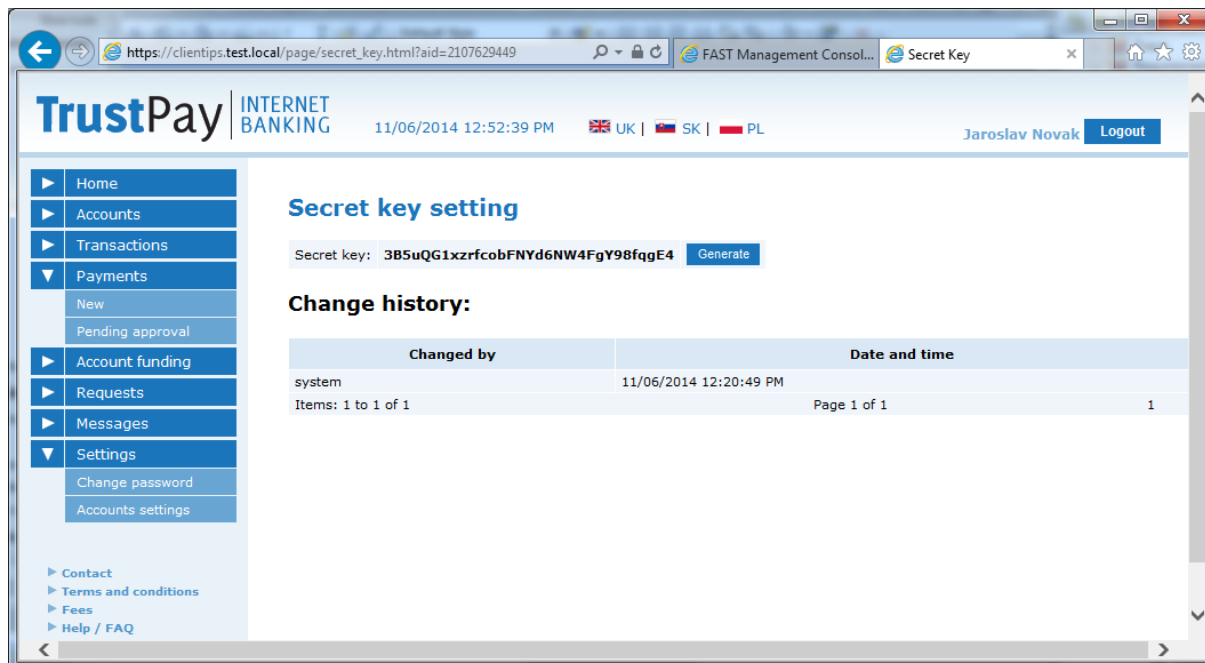


2. Go to Settings / Accounts settings. Under Accounts settings two action buttons are available for each account:
 - "Set as default"
 - "Secret key" - button is displayed only for accounts where user is an active disponent



3. Click on the secret key action button

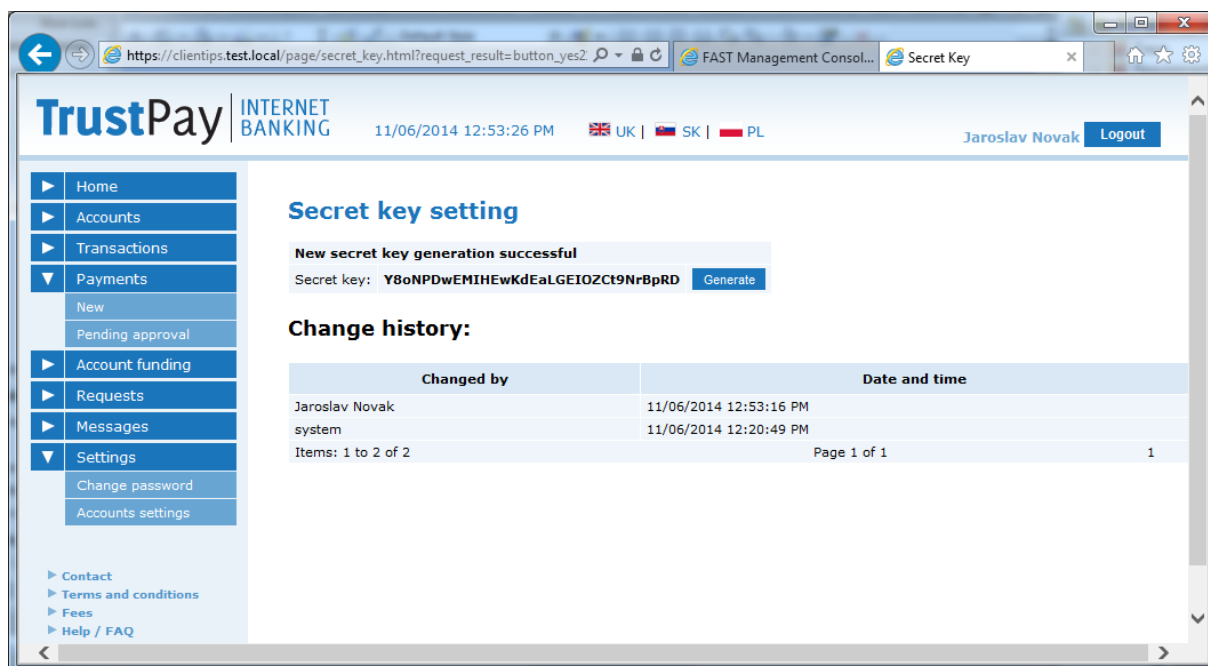
The secret key will be displayed in the field "Secret key" (it is a 32 characters long random string consisting of small letters, large letters and numbers). Apart from the secret key, also change history details with information about who and when generated a new secret key is displayed.



In case the merchant needs to **generate a new secret key**, click on the button "Generate". After clicking on the button a confirmation dialog is displayed in order to warn the merchant (or his active disponent) to consider the impact of a new secret key on his integration.



If dialog is confirmed, confirmation window will be closed and new secret key will be generated. Change history will be updated with user name and actual date and time and a new Secret key will be displayed in field Secret key.



If dialog is declined, confirmation window will be closed without generating a new secret key. In case the generation of secret key fails, the system will display an error message. Press the button "Generate" again and try to generate a new secret key.

Remember to update the new secret key value in your integration configuration as soon as possible, otherwise your customers might not be able to pay and you will not be able to process received payment notifications.

Appendix X – GetTransactionOrigin

Service GetTransactionOrigin returns evidences of transaction country of origin by TransferID. Service is available only for incoming transactions.

Merchant request:

Parameters for request are sent via method GET or POST.

- **AID** ID of merchant account
- **TID** ID of transaction
- **SIG** Signature

All parameters are required. SIG is computed from AID and TID in this order. Usage of Signature is completely described in [Appendix I](#), in this document.

The base "Production" URL for transaction country of origin identification is:

<https://ib.trustpay.eu/mapi/GetTransactionOrigin.aspx>

This service will be available in the production environment **from the 1st of January 2015**.

The base "TEST" URL for transaction country of origin identification is:

<https://ib.test.trustpay.eu/mapi/GetTransactionOrigin.aspx>.

This service will be available in the test environment **from the 12th of December 2014**.

MAPI response:

Response is XML document with structure specified lower contains following evidences about transaction country of payment origin:

- **CustomerIPCountry** Country from IP address, from which MAPI client was logged. Available only for MAPI payments.
- **PayerAccountCountry** Country from IBAN/BIC of debtor's account. Available only if provided by bank.
- **PayeeAccountCountry** Country of creditor's account. Available for every transaction.

Element	Parent	Children	Description
GetTransactionOriginResponse		ResultCode [1] Items [1] Signature [1]	Root element
TransferID	GetTransactionOriginResponse		ID of transaction, same as TID from request.
ResultCode	GetTransactionOriginResponse		Described in Appendix II – Result codes .
Items	GetTransactionOriginResponse	ItemOfEvidence[0..n]	
Signature	GetTransactionOriginResponse		Computed from whole xml without Signature tag with redundant white-spaces removed. Provided only with ResultCode 0 and 1011.
ItemOfEvidence	Items	Name [1] Evidences [1..n]	
Name	ItemOfEvidence		String. Following values available: CustomerIP AccountCountries
Evidences	ItemOfEvidence	Evidence [1..n]	
Evidence	Evidences	Name [1] Priority [1] Country [1]	
Name	Evidence		String. Following values available: CustomerIPCountry PayerAccountCountry PayeeAccountCountry
Priority	Evidence		Priority of evidence The lower value - the higher priority
Country	Evidence		String(3) Format defined in ISO3166-1Alpha-3

Signature computed from GetTransactionOriginResponse xml without Signature tag, with redundant white-spaces removed. Signature is provided only with result codes 0 - Success and 1011 - Transaction not supported.
 Completely Described in [Appendix I – Creating data sign](#).

Example:

```
<GetTransactionOriginResponse>
  <TransferID>171215</TransferID>
  <ResultCode>0</ResultCode>
  <Items>
    <ItemOfEvidence>
      <Name>CustomerIP</Name>
      <Evidences>
        <Evidence>
          <Name>CustomerIPCountry</Name>
          <Priority>1</Priority>
          <Country>POL</Country>
        </Evidence>
      </Evidences>
    </ItemOfEvidence>
    <ItemOfEvidence>
      <Name>AccountCountries</Name>
      <Evidences>
        <Evidence>
          <Name>PayerAccountCountry</Name>
          <Priority>1</Priority>
          <Country>CZE</Country>
        </Evidence>
        <Evidence>
          <Name>PayeeAccountCountry</Name>
          <Priority>10</Priority>
          <Country>SVK</Country>
        </Evidence>
      </Evidences>
    </ItemOfEvidence>
  </Items>
  <Signature>
    DF174E635DABBFF7897A82822521DD739AE8CC2F83D65F6448DD2FF991481EA3
  </Signature>
</GetTransactionOriginResponse>
```