Paytrail Plc

API Description of Payment Gateway

Table of Contents

Version history

Date	Version	Changes
22.05.2008	1.4.1	- Version history log started
25.06.2008	1.5	- Included an optional field REFERENCE_NUMBER. This field can be used to deliver a specific reference number to bank's service. - Fixed form tag name in state query form. Now: form, earlier: from. - Fixed hash construction description in state query. Hash was calculated correctly in example.
28.08.2008	1.6	- Updated HTML-formed state query instructions (version 2) - Added description for XML interface for querying payment state - Added new field NOTIFY_ADDRESS to payment gateway
23.09.2008	1.6.1	- Field NOTIFY_ADDRESS name fixed in English documentation (before: NOTIFY_URL). In the same listing the correct version number is also fixed.
23.09.2008	1.6.2	- Fixed payment state query address (CheckPayment.svm → Check.svm)
13.10.2008	1.6.3	- Translated two sentences on page 18 to English
14.10.2008	1.6.4	- Added CULTURE-variable values sv_SE and ru_RU in documentation. - Fixed English form example.
08.01.2009	1.7	- Added instructions about using form detailed information and updated examples
19.01.2009	1.7.1	- Removed USE_DETAILS field and added new interface version (TYPE=5) instead
22.01.2009	1.7.2	- Moved CURRENCY to it's correct position between fields ORDER_DESCRIPTION and RETURN_ADDRESS
26.01.2009	1.7.3	- CONTACT_CELLNO is now optional. Using Kreditor still requires this. - Fixed specification code used in country field ISO-3316-1 → ISO-3166-1
27.01.2009	1.7.4	Added optional field CONTACT_COMPANY, used for Kreditor when paying as a company
09.02.2009	1.7.5	- Added required field INCLUDE_VAT, which indicates whether PRICE-record prices include VAT - This English documentation separated from Finnish documentation to a different file.
12.02.2009	1.7.6	- Fixed AUTHCODE in example 2 on page 12. The value on page 13 is correct.
17.02.2009	1.7.7	- Defined allowed charsets (UTF-8 and ISO-8859-1) - Fixed ITEM_PRICE description (value includes VAT if INCLUDE_VAT=1)
20.03.2009	1.7.8	- Fixed quotes in examples - Added notification that item price can be negative as long as payment total is positive
30.03.2009	1.7.9	- Documented the use of floating point numbers
04.06.2009	1.8	- Added web services chapter and moved XML state queries under it - Added description on fetching accounting reports under chapter web services
13.08.2009	1.8.1	- Fixed error in interface version 4 example. Return URL's begin with https and not http
28.08.2009	1.8.2	- Fixed minor errors, updated table of contents, fixed max lengths of form fields - Removed support for culture "ru_RU"

07.09.2009	1.8.3	- Added missing TYPE field in version 4 example code listing - Added description about used character sets in examples
16.09.2009	1.8.4	- Moved web services documentation to external Web Services documentation - Added more explanation on using field REFERENCE_NUMBER
12/11/09	1.9	- Updated new interface descriptions (versions 4.1 and 5.1) - New chapter to describe upgrading from previous versions
19.11.2009	1.9.1	- Fixed example of using | character in URL's, correct encoding is %7C instead of %C7 - Fixes to invalid AUTHCODE's in forms (calculation examples were correct) - Fixed TYPE field specification
04.12.2009	1.9.2	- Fixed MD5 hash in version 5.1 example
08.02.2010	1.9.3	- Added missing method="post" to example listings – it has likely been lost due to some autoformatting - The separation character is "|" and not "|-". Made that more clear.
04.03.2010	1.10	- Replaced new URL for payment service (action). Old URL will be preserved but we recommend using the new one. - Added optional empty fields that are not used in examples as empty input tags to avoid misunderstandings (REFERENCE_NUMBER and CONTACT_COMPANY) - Added more explanation on NOTIFY_ADDRESS-field description. - Replaced Kreditor's name with Klarna (new name).
09.04.2010	2.0	- New interface versions S1 and E1 - Interface version naming convention changed. S1 (Simple 1) is extended from previous 4.1 and E1 (Extended 1) is extended from 5.1
12.04.2010	2.0.1	- Fixed examples - Minor updates to text around the documentation
28.04.2010	2.0.2	- Fixed new URL (form action) in examples
11.06.2010	2.1	- Fixed NOTIFY_ADDRESS description (call happens within a few minutesm not immediately) - Emphasized REFERENCE_NUMBER field warning - Added Nordea wire transfer and Netposti IDs - PENDING_ADDRESS on nyt käytössä, lisätty kuvaus - Changed merchant id in state query from 12345 to 13466 for more integrity - Added note that whole URL should not be encoded but only parameter values - Added all – including empty optional fields to examples for clarity. Fixed AUTHCODE values in example forms.
13.09.2010	2.1.1	- Added missing PENDING_ADDRESS description - Added note that PENDING_ADDRESS is called with same parameters as RETURN_ADDRESS and NOTIFY_ADDRESS - Fixed TYPE parameter form F → AN - URL length limit increased from 255 → 2048 - Added mention that in the second example used charset does not affect the result AUTHCODE
16.01.2012	2.1.2	- Added Joustoraha and Collector Payport payment method codes in preselected method field description
29.10.2012	2.2	- Removed references to Netposti payment method (no longer available) - Added information to PENDING_ADDRESS that it is not longer used.

29.11.2013	2.3	- Changed to Paytrail look and feel - Changed URL's from verkkomaksut.fi to paytrail.com - Changed the minimum payment amount to 0,65€ - Removed mention of depracated payment method 13, the old Collector version. - Removed mentions of available modules. - Removed payment state queries, since the latest version is available elsewhere.

Sending the payment details from webshop

This document describes how a web shop communicates with the payment gateway.

The gateway that processes payments is available at https://payment.paytrail.com/

Upgrading from previous versions

General

The following describes the steps which need to be taken in order to upgrade interface implementation from previous versions to new S1 or E1 version. Due to interface version naming convention upgrade these versions are extended from previous versions 4.1 and 5.1 accordingly.

Interface version S1 is somewhat easier to implement as compared to version E1. S1 includes less data to be delivered to Paytrail service. E1 version implementation adds client information (name, address, etc) and ordered products to S1 implementation.

Using interface version E1 over S1 gives these benefits:

– Paytrail Merchant's panel shows client data and ordered products with the payment data

– Invoicing and part payment options are usable (more specifically Klarna and Collector)

– Method of payment fees can be defined (fixed or pecentage price for using a specified payment method)

5.1 → E1 and 4.1 → S1

Interface version E1 has replaced the previous version 5.1 and interface version S1 has replaced previous version 4.1. Both extensions include the same set of changes (new fields). Interface version upgrade requires to include optional fields PENDING_ADDRESS, PRESELECTED_METHOD, MODE, VISIBLE_METHODS and GROUP in hash calculation. Please check the positions of these fields in the listing provided in next chapter. Return call (RETURN_ADDRESS or CANCEL_ADDRESS) implementation has not changed in this update.

5 → 5.1 and 4 → 4.1

Interface version 5.1 has replaced older version 5. Use this note list when upgrading from version 5 to 5.1:

– Use | character (pipe, vertical bar) as separator instead of &-character in AUTHCODE calculation

– Send TYPE value 5.1 instead of 5.

– No values may contain | characters. These character must be removed or replaced before sending data to Paytrail. If you need to use | character in URLs, we recommend having URL parameter values encoded (in PHP, use urlencode-function). Especially | character must be replaced with string %7C.

– Used payment method field (METHOD) has been added to return query. This must be handled in checking return query hash. &-characters has also been replaced by | characters (pipe, vertical bar) in return authentication calculation to preserve analogy.

When upgrading to version 4.1 from version 4 use list above but use TYPE value 4.1.

Fields to be sent to payment gateway

The lengths given in following tables are maximum lengths. If given length is exceeded, payment won't be accepted.

Field form is either N, F or AN in the following tables. N stands for numeric and value is thus a number. F stands for a floating point number. Floating point numbers are expressed with two decimals at most. Dot (.) is used as separator for decimal point. Supported character sets are UTF-8 and ISO-8859-1. These character sets cannot be mixed.

Note! Values may not contain | characters (pipe, vertical bar). These values must be removed or replaced by other character before sending to Paytrail service. If you need to use | character in URLs, we recommend having URL parameter values encoded (in PHP, use urlencode-function). Especially | character must be replaced with string %7C.

Field necessity is marked in column Required/Optional.

> *Please note! It is not recommended to use REFERENCE_NUMBER field unless there is a justifiable requirement for it. Field allows to pass a web shop generated reference number for reference payment through Paytrail service. Field value is only used with payment methods which are used with merchant's own contracts using only technical implementation from Paytrail. With other payment methods (or when REFERENCE_NUMBER is omitted) Paytrail always generates reference number automatically.*

Field	Field name	Length max.	Form	Required/Optional
Merchant ID	MERCHANT_ID	11	N	R
Payment amount	AMOUNT	10	F	- (R)
Order number	ORDER_NUMBER	64	AN	R
Reference number	REFERENCE_NUMBER	50	N	O
Order description	ORDER_DESCRIPTION	65 000	AN	O
Currency	CURRENCY	3	A	R
Return address / Successful payment	RETURN_ADDRESS	2048	AN	R
Return address / Failed payment	CANCEL_ADDRESS	2048	AN	R
Return address / Pending payment	PENDING_ADDRESS	2048	AN	O
Notify address	NOTIFY_ADDRESS	2048	AN	R
Type	TYPE	3	AN	R
Culture	CULTURE	8	AN	O
Preselected payment method	PRESELECTED_METHOD	2	N	O

Field	Field name	Length max.	Form	Required/Optional
Service type	MODE	1	N	O
Visible payment methods. By default, all available methods are shown. **Currently not in use.**	VISIBLE_METHODS	64	AN	O
Group code. **Currently not in use.**	GROUP	16	AN	O
Authentication hash	AUTHCODE	32	AN	R

In addition to these fields, detailed order information can be used in interface version E1. These fields are not available in version S1.

Field	Field name	Length max.	Form	Required / Optional
Payer telephone number	CONTACT_TELNO	64	AN	O
Payer cellphone number	CONTACT_CELLNO	64	AN	O (Using Klarna requires this or CONTACT_TELNO)
Payer email	CONTACT_EMAIL	255	AN	R
Payer first name	CONTACT_FIRSTNAME	64	AN	R
Payer last name	CONTACT_LASTNAME	64	AN	R
Payer company	CONTACT_COMPANY	128	AN	O
Payer street address	CONTACT_ADDR_STREET	128	AN	R
Payer postal code	CONTACT_ADDR_ZIP	16	N	R
Payer city	CONTACT_ADDR_CITY	64	AN	R
Payer home country	CONTACT_ADDR_COUNTRY	2	AN	R
VAT inclusion	INCLUDE_VAT	1	N	R
Number of product rows	ITEMS	10	N	R

In addition to these, order rows can be brought to Paytrail service using the following repetitive fields. Order rows are brought only if using version E1.

Field	Field name	Length max.	Form	Required / Optional
Product name	ITEM_TITLE[X]	255	AN	R
Product number	ITEM_NO[X]	16	AN	O

Field	Field name	Length max.	Form	Required / Optional
Amount of products	ITEM_AMOUNT[X]	10	N	R
Product price	ITEM_PRICE[X]	10	N	R
Product tax perent	ITEM_TAX[X]	10	N	R
Product discount percent	ITEM_DISCOUNT[X]	10	N	O
Product type	ITEM_TYPE[X]	2	N	O

Field descriptions

Field	Explanation
Merchant ID	Merchant ID is merchant idetification number given by Paytrail. Merchant ID consists of digits only and it can be found from material sent to merchant by Paytrail. (required)
Payment amount	Price is given in Euros and Cents. Price is given without currency type and decimals are separated with a dot. Price must contain two decimals. Example: 15.50. Minimum price accepted by the service is 0.65 €. **Price field is not used with in version E1. Order price is counted from order rows.** (required in S1/not used in E1).
Order ID number	Order number is used to identify one transaction from another in web shop software. (required)
Reference number	By default, the reference number is generated automatically. For payment methods which are used as an interface, the reference number can be given in this field to be delivered to bank's service instead of the automatically generated one. (optional)
Order description	Any additional written information can be sent to Payment Gateway. It can be used to back up order information like customer address, product information etc. Order description is only visible through Merchant Panel. (optional)
Currency	Currency. Only EUR is accepted for Finnish banks and credit cards. (required)
Return URL for succesful payment	URL where customer is redirected after successful payment. (required)
Return URL for failed payment	URL where customer is redirected after failed or cancelled payment. (required)

Field	Explanation
Return URL for pending payment	Not in use (optional)
Notfication URL	URL to be called when the payment has been marked as paid. This URL is called with same GET parameters as RETURN_ADDRESS when the payment is marked as paid. Note that NOTIFY_ADDRESS request is done by Paytrail server and thus possible consumer browser session does not exist. NOTIFY_ADDRESS-request is normally done within a couple of minutes from completing the payment. (optional)
Type	Newest versions are S1 and E1. (required)
Culture	Culture affects on default language and how amounts are shown on payment method selection page. Available cultures are 'fi_FI", "sv_SE" and "en_US". The default culture is always 'fi_FI".
Preselected payment method	If payment method selection is done in web shop, payment method is delivered in this field. 1 = Nordea 2 = OP-Pohjola (Osuuspankki) 3 = Danske bank 4 = Tapiola 5 = Ålandsbanken 6 = Handelsbanken 7 = Säästöpankit, POP, Aktia, Nooa 8 = Luottokunta 9 = Paypal 10 = S-Pankki 11 = Klarna, Laskulla 12 = Klarna, Osamaksulla 18 = Joustoraha 19 = Collector (optional)
Service type	Paytrail service can be bypassed when using payment methods with own contracts and whne preselected payment method is delivered (PRESELECTED_METHOD). Use requires agreement on use with Paytrail. 1 = Normal service 2 = Bypassing Paytrail payment method selection Default value is 1. Use of value 2 requires agreement with Paytrail. (optional)
Visible payment methods	Currently not in use. (optional)
Group code	Currently not in use. (optional)
Merchant Authentication Hash	Authentication hash code calculated using MD5. It is used to prevent frauds and to identify the webshop.

Next table represents the additional field descriptions. These are available only in version E1.

Field	Description
Payer telephone number	Payer telephone number (optional)
Payer cellphone number	Payer cellphone number (optional, but using Klarna requires this or payer telephone number. If netiher is defined Klarna will be hidden)
Payer first name	Payer first name (required)
Payer last name	Payer last name (required)
Payer company	Payer company (optional)
Payer street address	Payer street address (required)
Payer zip code	Payer zip code (required)
Payer city	Payer city (required)
Payer home country	Payer home country. Data is given using ISO-3166-1 -standard values. For example, Finland is FI and Sweden is SE. These values are not case sensitive. This information is used for checking credit history and thus it is required. (required)
VAT inclusion	Whether VAT is included in prices given in ITEM-records. Value 1 indicates that VAT is included in given price. Value 0 indicates that price does not include VAT. Use web shop native value to avoid rounding errors. That means, if product prices are saved without VAT in the webshop software, use 0 and if prices are saved with VAT, use 1. NOTE! If using the Collector payment method, the value MUST be 1. Collector will not be availabe if the value is 0.
Number of rows	Number of order rows. Corresponding product rows must be given in form. (required)

The following table represents the product row descriptions:

Field	Description
Product name	Free field for product name. Product name will be shown in merchants panel and it is used in Klarna service as a name for product. (required)
Product number	Optional product number. This is shown in merchant's panel with the product. This might help fixing the product rows to actual products. (optional)
Number of products	Number of products. Usually the value is 1 (required). NOTE! If usind the Collector payment method, this value must be a whole number. If a decimal number such as 0.5 is used, the Collector payment method will be hidden. 1.0 is accepted.
Products price	A price for a single product. If INCLUDE_VAT=0, this is price not including VAT. If INCLUDE_VAT=1, this price includes VAT. Price may be negative value if discount is given. Payment total must be positive. (required) The sum total of the product prices must be larger than 0.65€.
Product tax percent	Tax percent used for product. In Finland this is usually 24% in November 2013. (required)
Product discount percent	If discount is given, this field can be used. Percent is a number 0-100. Default value is 0. (optional)
Product type	Type can be defined for each product row. Type 1 means normal product row. Type 2 is used for shipment costs. Type 3 is used for handling costs. Default value is 1 (optional)

Example 1 – Complete version

This example 1 is about sending payment information in the most complete form. In this case we are using the interface version E1. We recommend using Paytrail gateway in the way described here. Example 2 is a simplified example which does not offer as many features as this one.

This form is placed in the webshop by the payment method selection. The form shows the payment button currently in use and moves customer to payment service payment selection page when clicked.

All fields are listed in this example, including optional unnecessary fields for better clarity. They can be removed from form. Please note that in AUTHCODE calculation all fields, including optional parameters must always be used!

```
<form action="https://payment.paytrail.com/" method="post">
   <input name="MERCHANT_ID" type="hidden" value="13466">
   <input name="ORDER_NUMBER" type="hidden" value="123456">
   <input name="REFERENCE_NUMBER" type="hidden" value="">
   <input name="ORDER_DESCRIPTION" type="hidden" value="Testitilaus">
   <input name="CURRENCY" type="hidden" value="EUR">
   <input name="RETURN_ADDRESS" type="hidden" value="http://www.esimerkki.fi/success">
   <input name="CANCEL_ADDRESS" type="hidden" value="http://www.esimerkki.fi/cancel">
   <input name="PENDING_ADDRESS" type="hidden" value="">
```

```
    <input name="NOTIFY_ADDRESS" type="hidden" value="http://www.esimerkki.fi/notify">
    <input name="TYPE" type="hidden" value="E1"
    <input name="CULTURE" type="hidden" value="fi_FI">
    <input name="MODE" type="hidden" value="1">
    <input name="VISIBLE_METHODS" type="hidden" value="">
    <input name="GROUP" type="hidden" value="">

    <input name="CONTACT_TELNO" type="hidden" value="0412345678">
    <input name="CONTACT_CELLNO" type="hidden" value="0412345678">
    <input name="CONTACT_EMAIL" type="hidden" value="esimerkki@esimerkki.fi">
    <input name="CONTACT_FIRSTNAME" type="hidden" value="Matti">
    <input name="CONTACT_LASTNAME" type="hidden" value="Meikäläinen">
    <input name="CONTACT_COMPANY" type="hidden" value="">
    <input name="CONTACT_ADDR_STREET" type="hidden" value="Testikatu 1">
    <input name="CONTACT_ADDR_ZIP" type="hidden" value="40500">
    <input name="CONTACT_ADDR_CITY" type="hidden" value="Jyväskylä">
    <input name="CONTACT_ADDR_COUNTRY" type="hidden" value="FI">
    <input name="INCLUDE_VAT" type="hidden" value="1">
    <input name="ITEMS" type="hidden" value="2">

    <input name="ITEM_TITLE[0]" type="hidden" value="Tuote #101">
    <input name="ITEM_NO[0]" type="hidden" value="101">
    <input name="ITEM_AMOUNT[0]" type="hidden" value="1">
    <input name="ITEM_PRICE[0]" type="hidden" value="10.00">
    <input name="ITEM_TAX[0]" type="hidden" value="22.00">
    <input name="ITEM_DISCOUNT[0]" type="hidden" value="0">
    <input name="ITEM_TYPE[0]" type="hidden" value="1">
    <input name="ITEM_TITLE[1]" type="hidden" value="Tuote #202">
    <input name="ITEM_NO[1]" type="hidden" value="202">
    <input name="ITEM_AMOUNT[1]" type="hidden" value="2">
    <input name="ITEM_PRICE[1]" type="hidden" value="8.50">
    <input name="ITEM_TAX[1]" type="hidden" value="22.00">
    <input name="ITEM_DISCOUNT[1]" type="hidden" value="0">
    <input name="ITEM_TYPE[1]" type="hidden" value="1">

    <input name="AUTHCODE" type="hidden" value="399A88703393FCDD7BCD6C5512EC6F30">

    <input type="image" name="sv_button" SRC="https://ssl.paytrail.com/logo/payhere_fin.jpg">
  </form>
```

In the example above, the last hidden field, AUTHCODE, is calculated as described below.

Join all fields in the order they are described in this document. Fields are joined by placing | character (pipe, vertical bar) between each two fields. If any of the fields is left out, empty string should be used. In this case the string will contain two or more adjacent | characters. AUTHCODE is formed from this string by calculating MD5-sum. This sum is converted to it's 32-characters long hexadecimal form and lowercase letters are capitalized.

If additional information is not used (TYPE=S1), only fields form MERCHANT_ID to CULTURE are used.

In the example above, the field values are as follows:

Merchant authentication hash	6pKF4jkv97zmqBJ3ZL8gUw5DfT2NMQ

Merchant ID	13466
Order number	123456
Reference number	
Order description	Testitilaus
Currency	EUR
Return address/successful payment	http://www.esimerkki.fi/success
Return address/failed payment	http://www.esimerkki.fi/cancel
Return address/pending payment	
Notify address	http://www.esimerkki.fi/notify
Version number	E1
Culture	fi_FI
Preselected payment method	
Service mode	1
Visible payment methods	
Group code	
Payer telephone number	0412345678
Payer cellhone number	0412345678
Payer email	esimerkki@esimerkki.fi
Payer first name	Matti
Payer last name	Meikäläinen
Payer company	
Payer street address	Testikatu 1
Payer zip code	40500
Payer city	Jyväskylä
Payer home country	FI
VAT inclusion	1
Number of order rows	2
Product #1, name	Tuote #101
Product #1, number	101
Product #1, amount	1
Product #1, price	10.00
Product #1, tax percent	22.00
Product #1, discount percent	0
Product #1, type	1
Product #2, name	Tuote #202
Product #2, number	202

Product #2, amount	2
Product #2, price	8.50
Product #2, tax percent	22.00
Product #2, discount percent	0
Product #2, type	1

Now the string to be used for AUTHCODE calculation is formed by joining the fields abobe:

6pKF4jkv97zmqBJ3ZL8gUw5DfT2NMQ|13466|123456||Testitilaus|EUR|http://www.esimerkki.fi/success|
http://www.esimerkki.fi/cancel||http://www.esimerkki.fi/notify|E1|fi_FI||1|||0412345678|0412345678|
esimerkki@esimerkki.fi|Matti|Meikäläinen||Testikatu 1|40500|Jyväskylä|FI|1|2|Tuote #101|101|1|10.00|22.00|0|1|
Tuote #202|202|2|8.50|22.00|0|1

MD5-sum is counted from this string:

399a88703393fcdd7bcd6c5512ec6f30 (UTF-8)

or

25e8758fd39fe63203c02411daad8bf5 (ISO-8859-1)

Lowercase letters are then capitalized to get the final AUTHCODE value:

399A88703393FCDD7BCD6C5512EC6F30 (UTF-8)

or

25E8758FD39FE63203C02411DAAD8BF5 (ISO-8859-1)

Example 2 – Simplified version

This example shows how to use the gateway service without additional payment information. In this case we are using interface version S1. In most cases the additional payment information should be used (see example 1).

This form is placed in the webshop by the payment method selection. The form shows the payment button currently in use and moves customer to payment service payment selection page when clicked.

All fields are listed in this example, including optional unnecessary fields for better clarity. They can be removed from form. Please note that in AUTHCODE calculation all fields, including optional parameters must always be used!

```
<form action="https://payment.paytrail.com/" method="post">
   <input name="MERCHANT_ID" type="hidden" value="13466">
   <input name="AMOUNT" type="hidden" value="99.90">
   <input name="ORDER_NUMBER" type="hidden" value="123456">
   <input name="REFERENCE_NUMBER" type="hidden" value="">
   <input name="ORDER_DESCRIPTION" type="hidden" value="Testitilaus">
   <input name="CURRENCY" type="hidden" value="EUR">
   <input name="RETURN_ADDRESS" type="hidden" value="http://www.esimerkki.fi/success">
   <input name="CANCEL_ADDRESS" type="hidden" value="http://www.esimerkki.fi/cancel">
   <input name="PENDING_ADDRESS" type="hidden" value="">
```

```
    <input name="NOTIFY_ADDRESS" type="hidden" value="http://www.esimerkki.fi/notify">
    <input name="TYPE" type="hidden" value="S1">
    <input name="CULTURE" type="hidden" value="fi_FI">
    <input name="MODE" type="hidden" value="1">
    <input name="VISIBLE_METHODS" type="hidden" value="">
    <input name="GROUP" type="hidden" value="">

    <input name="AUTHCODE" type="hidden" value="270729B19016F94BE5263CA5DE95E330">

    <input type="image" name="sv_button" src="https://ssl.paytrail.com/logo/payhere_fin.jpg">
  </form>
```

The last hidden-field, AUTHCODE, in the listing above is calculated as follows.

Like in example 1, join form fields in the order they are mentioned in this document and use | character (pipe, vertical bar) between the fields.

The values used in this example are shown in the next table:

Merchant authentication hash	6pKF4jkv97zmqBJ3ZL8gUw5DfT2NMQ
Merchant ID	13466
Payment amount	99.90
Order number	123456
Reference number	
Order description	Testitilaus
Currency	EUR
Return address/successful payment	http://www.esimerkki.fi/success
Return address/failed payment	http://www.esimerkki.fi/cancel
Return address/pending payment	
Notify address	http://www.esimerkki.fi/notify
Type	S1
Culture	fi_FI
Preselected payment method	
Service mode	1
Visible paymement method	
Group code	

Joining the above fields:

6pKF4jkv97zmqBJ3ZL8gUw5DfT2NMQ|13466|99.90|123456||Testitilaus|EUR|http://www.esimerkki.fi/success|
http://www.esimerkki.fi/cancel||http://www.esimerkki.fi/notify|S1|fi_FI||1||

This string is used as a base for MD5-sum and this produces the following string:

270729b19016f94be5263ca5de95e330

Lower case letters are capitalized and the final AUTHCODE is:

270729B19016F94BE5263CA5DE95E330

Please note that this exmple did not include any characters that are handled differently in charsets UTF-8 and ISO-8859-1. Because of this, the AUTHCODE is the same not depending on which charset is used.

Receiving the Payment Receipt

After the payment has been successfully completed a customer is redirected in URL defined in previous stage (RETURN_ADDRESS). If the payment was not completed customer is directed to return URL of failed payment (CANCEL_ADDRESS).

There is also a notification address NOTIFY_ADDRESS, that is called programmatically when Paytrail marks payment completed. Typically NOTIFY_ADDRESS is called within a few minutes after redirecting customer to RETURN_ADDRESS. If customer does not return to Paytrail service from bank's service the information on successful payment will not be immediately available. In this case the information will be available within 24 hours and NOTIFY_ADDRESS will be called immediately when that information has arrived. NOTIFY_ADDRESS call includes same GET-parameters as redirecting to RETURN_ADDRESS does.

The receipt carries unique return information that is used to verify the validity of the receipt and that the payment was actually successful. Return Authentication Hash is compared to hash calculated in web shop and if values match, the payment receipt was not tampered.

In return authentication hash calculation, fields are joined using | character (pipe, vertical bar) as separator. Merhant hash is appended to string. When payment is not succesful, only fields 1,2 and 5 are returned and only fields 1, 2 and merchant hash are used in hash calculation.

Receipt contains these fields

Field number	Field	Variable name
1.	Order Number	ORDER_NUMBER
2.	Time stamp of transaction	TIMESTAMP
3.	Paid Transcation ID	PAID
4	Payment method	METHOD
5.	Return Authentication Hash	RETURN_AUTHCODE

Field explanations

Field	Explanation
Order number	This is the same order number that was generated in web shop and sent to Payment Gateway.
Timestamp	Timestamp generated by Payment Gateway that is used to calculate Return Authentication Hash. Timestamp is in UNIX format which means it is shown in seconds from 1/1/1970.
Paid Transcation ID	Paid Transcation ID number is generated by Payment Gateway. It is used to verify the validity of successful payment. If no Paid Transcation ID is received, payment has not been completed.

Field	Explanation
Payment method	Used payment method. This is not returned if payment is not succesful. Value is expressed as an integer. The following payment methods are currently possible: 1 = Nordea 2 = OP-Pohjola (Osuuspankki) 3 = Danske Bank 4 = Tapiola 5 = Ålandsbanken 6 = Handelsbanken 7 = Säästöpankit, POP, Aktia, Nooa 8 = Luottokunta 9 = Paypal 10 = S-Pankki 11 = Klarna, Laskulla 12 = Klarna, Osamaksulla 13 = Collector (will be deprecated on November 2012, replaced by 19) 18 = Joustoraha 19 = Collector
Return Authentication Hash	Return Authentication Hash is a checksum value which is compared to one calculated in webshop. If the checksum matches to calculated one, the payment has been completed and the information has not been modified after sending. Hash can be identical in both successful and failed transactions.

Example of calculation

Order number	15153
Timestamp	1176557554
Paid transaction ID	F4SDGF23FS
Payment method	1
Merchant authentication hash	6pKF4jkv97zmqBJ3ZL8gUw5DfT2NMQ

Combining these fields using |-character as separator, the following string is formed:

15153|1176557554|F4SDGF23FS|1|6pKF4jkv97zmqBJ3ZL8gUw5DfT2NMQ

Calculating MD5 hash from this string, we get: 191fae904a0b9a57ca30a35c715abaf9

Translating lower case letter to upper case, the final hash is formed:

191FAE904A0B9A57CA30A35C715ABAF9

If calculated hash equals to one received from Payment Gateway (RETURN_AUTHCODE) the receipt is correct.

Technical support

For technical assistance you can call +358 207 1818 31 or you can send email to technical customer support: tech@paytrail.com.