e-Commerce Advanced

Technical Integration Guide for e-Commerce v.5.4.3

1 Introduction 5

2 Best Practices 6

3 Test Environment 7

3.1 Configuring your test account 7

4 Sales Process 8

5 General Payment Parameters 10

5.1 Default operation code 10

5.2 Default data capture (payment) procedure 10

5.3 Processing for individual transactions 11

6 Link between the merchant's website and our payment page 13

6.1 Order form 13

6.1.1 Form fields 13

6.1.2 Form action 15

6.2 General parameters and optional customer details 15

6.2.1 Hidden fields 15

7 Security: Check before the Payment 17

7.1 Referrer 17

7.1.1 Configuration 17

7.1.2 Possible errors 17

7.1.3 Limitations 17

7.2 SHA-IN signature 17

7.3 IP address check 17

8 Look and feel of the payment page 18

8.1 Payment page layout (Static template) 18

8.1.1 iPhone static template 19

8.2 Template-based page layout (Dynamic template) 21

8.2.1 Hidden fields 21

8.2.2 Payment zone 22

8.2.3 Dynamic behaviour 22
8.2.4 Style sheets 22
8.2.5 Performance 24
8.3 Template security control 24
8.4 Secure environment padlock 25
8.5 Cancel button 25
8.6 Payment page in iframe 25

9 Transaction feedback to the customer and the merchant 27
9.1 Default reaction 27
9.1.1 Hidden fields 27
9.2 Redirection depending on the payment result 28
9.2.1 Hidden fields 28
9.2.2 Browser alert notification 29
9.2.3 Database update option 29
9.2.3.1 Feedback parameters 29
9.2.3.2 Security measures 31
9.2.3.3 Combination with a feedback request 31
9.3 Direct feedback requests (Post-payment) 31
9.3.1 Post-payment URLs and parameters 31
9.3.1.1 Post-payment URLs 32
9.3.1.2 Variable post-payment URLs 32
9.3.1.3 Feedback parameters 32
9.3.2 Timing of the feedback request 33
9.3.3 Response to the customer 33
9.4 Security: check origin of the request 34
9.4.1 IP address check (only for feedback requests) 34
9.4.2 SHA-OUT signature (for feedback requests and redirections) 34
9.5 Confirmation e-mails 34
9.5.1 E-mails to the merchant 34
9.5.2 E-mails to the customer 34

10 Other optional hidden fields 35
10.1 Payment method and payment page specifics 35
10.1.1 Payment method selection on the merchant's side 35
10.1.1.1 Showing a specific payment method 35
10.1.1.2 Allowing the customer to choose another payment method: backurl 35
10.1.2 Showing a specific list of payment methods 36

10.1.3 Excluding specific Payment Methods 37
10.1.4 Layout of the payment methods 37
10.1.5 3-D secure 37
10.2 Operation 38
10.3 User field 38
10.4 Delivery & Invoicing Data 39
10.5 Order Details 40

11 Appendix: SHA 41
11.1 SHA-IN signature 41
11.2 SHA-OUT signature 42
11.3 SHA-1 module 43

12 Appendix: UTF-8 44

13 Appendix: Troubleshooting 45

14 Appendix: Short Status Overview 47

15 Appendix: e-Commerce via e-mail 49

16 Appendix: List of Parameters to be included in SHA Calculations 50
16.1 SHA-IN 50
16.2 SHA-OUT 56

1 Introduction

Advanced e-Commerce explains the advanced integration of PostFinance e-Commerce into your website. This document complements the Basic e-Commerce document.

For the configuration and functionality of the administration site, please refer to the Back-Office User Guide.

2 Best Practices

PostFinance has defined a set of best practices to guarantee an optimal integration of your website with the payment platform and in order to ensure the smooth processing of your transactions.

PostFinance recommends these best practices to all merchants, but especially larger merchants who envisage an average transaction volume of over 1000 transactions per day and/or merchants who expect transaction peaks of more than 25 simultaneous transactions per minute.

If these criteria apply to you, we would kindly invite you to contact us and ask our technical support engineers to analyse whether the best practices were applied correctly and to give you feedback on how to further improve your integration with the payment platform.

Additionally, by informing PostFinance of the launch of your e-Commerce website and/or specific promotion campaigns that will affect the traffic on your web shop, we shall be able to provide extra monitoring to ensure that everything runs smoothly.

These best practices can be found at the beginning of each chapter, where relevant.

3 Test Environment

We recommend you develop your integration in our test environment before going live in the production environment. Our test environment works identically to our production environment, except that we do not send the transactions to the card acquirer and the usage is free of charge.

Our test environment allows you to simulate payments, change your account configuration and fine-tune the integration of our payment system into your website.

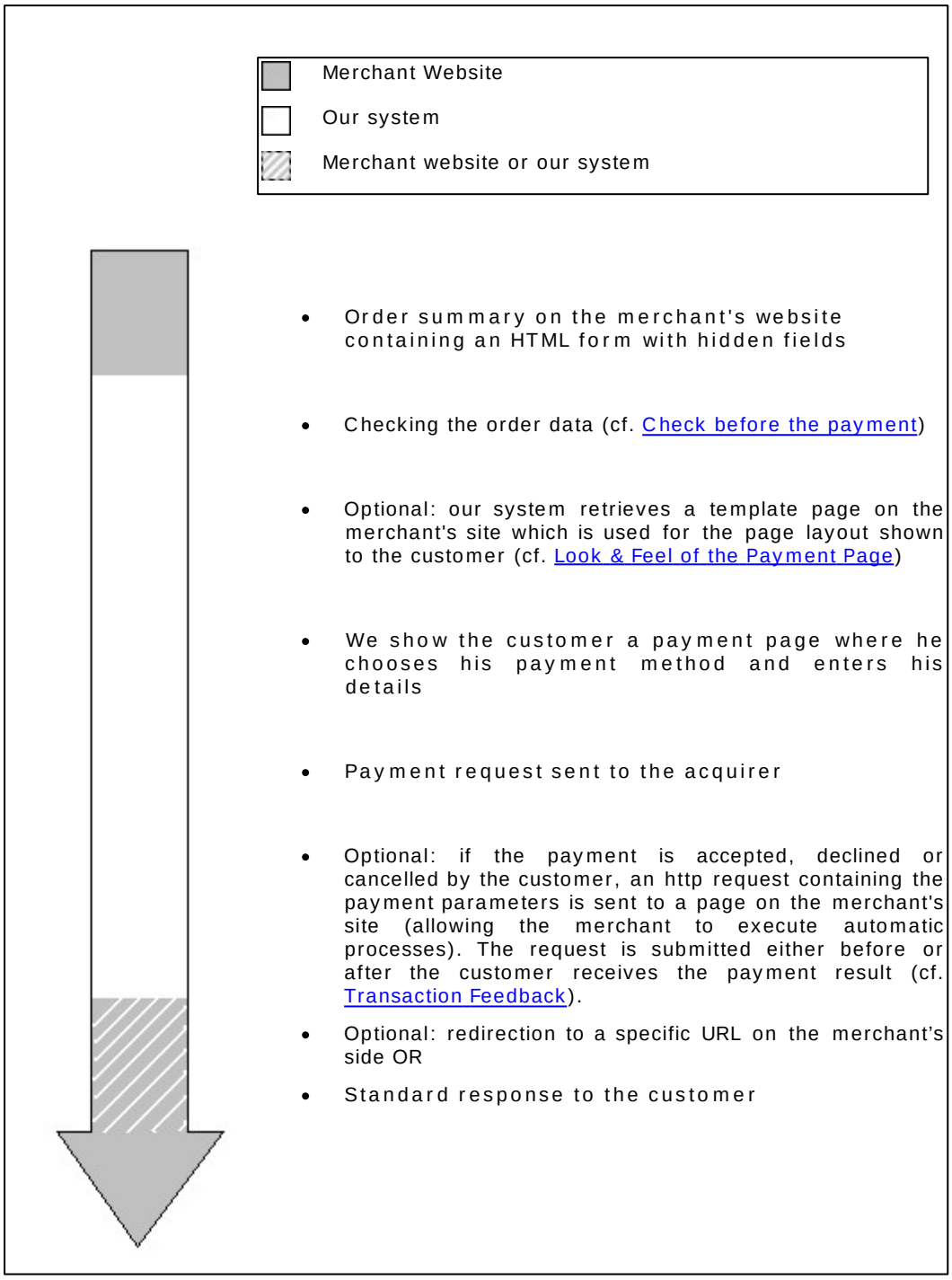
3.1 Configuring your test account

When you first log into your account, you will have to introduce your e-mail address and change the password. You will also be able to introduce/modify technical details of your test account and create new users. For details on how to create, access and configure your test account, please refer to the Basic e-Commerce documentation. The configuration of the technical details will be explained in the following chapters.

The technical details have to be configured on the Technical information page of your account. You can access the technical parameters via the link “Technical information” in your account menu.

4 Sales Process

The following workflow represents a transaction with basic steps (in bold) and optional steps:



The merchant can enhance his integration by securing the order data, personalising the payment pages, picking up feedback after a transaction and personalising the response to his customer.

This manual explains the advanced e-Commerce integration features, along with the optional steps to personalise the transaction flow and fine-tune the integration.

For a screenshot representation of a sales process following a basic e-Commerce integration, please refer to the Basic e-Commerce documentation.

5 General Payment Parameters

For some payment methods (mainly credit cards), transactions are performed in two stages: the authorisation and the data capture (payment request). (See Default operation code and Default data capture (payment) procedure)

During the authorisation step, the transaction amount is either reserved on the customer's card or account, or the request is matched against a blacklist (AUT operation).

In the data capture (payment request) step, the merchant's acquirer is requested to take the reserved or blacklist matched amount from the customer's card or account and transfer it to the merchant's bank account (DCP operation).

Additional payment methods (mainly credit cards) allow either online or offline transaction processing. (See Processing for individual transactions)

The merchant can instruct our system to request the payment or authorisation immediately from the acquirer (online processing), or simply confirm the receipt of the transaction and save it for capture by the acquirer at a later time (offline processing).

The payment behaviour depends on the general parameters defined by the merchant in his back office, on the Technical information page > "Global transaction parameters" tab: the *Default operation code*, the *Default data capture (payment) procedure* and the *Processing for individual transactions*. These parameters are set for each account, meaning they apply to all transactions within the merchant's account.

5.1 Default operation code

IMPORTANT

The ability to work in two stages (authorisation + data capture) depends on the payment methods you wish to use. (See the online Payment Methods Processing/Procedure overview).

Based on the two "Authorisation" and "Data capture" stages, the merchant can choose between two default operation codes in the "Global transaction parameters" tab, "Default operation code" section on the Technical information page:

- Authorisation

  Our system will only ask for authorisation, in order to have the authorisation and data capture (payment request) stages performed separately at different times (the money remains in the customer's account until a data capture (payment request) has been performed).

- Sale

  Our system automatically requests immediate payment (transfer of the amount) following successful authorisation. This procedure is often used for goods/services delivered online.

5.2 Default data capture (payment) procedure

IMPORTANT

The ability to work in two steps (authorisation + data capture) depends on the payment methods you wish to use. (See the online Payment Methods Processing/Procedure overview).

If the merchant has set "Authorisation" as the default operation code for his account or has included the "Authorisation" operation code in the transaction details, a data capture procedure will have to be performed to request the transaction payment.

Three possible data capture (payment request) procedures are available:

- Data capture by the merchant (manual or automatic):

To request the transfer of the reserved amount to the merchant's bank account, the merchant must call up his administration module and request the data capture (payment) for the specific transaction (please refer to the Back-Office User Guide).

The merchant can also automate the data process by sending us the data captures via batch or via a server-to-server request (please refer to the Batch or DirectLink information).

The validity period an authorisation depends on the merchant's acquirer contract.

This procedure is often used if the merchant has to check his stocks before dispatching the ordered goods.

- Automatic data capture by our system at the end of the day:

  Our system requests the payment (data capture) automatically as from midnight, GMT+1 time.

- Automatic data capture by our system after x days:

  Our system requests the payment (data capture) automatically after x days (if the merchant hasn't cancelled the authorisation).

  The minimum number of days you can enter is "2", since "1" would lead the payment to be requested automatically as from midnight, i.e. an "Automatic data capture by our system at the end of the day".

  This procedure is often used for goods/services delivered within a specific time frame (24 hours, 48 hours, etc.).

5.3 Processing for individual transactions

IMPORTANT

The ability to work online or offline depends on the payment methods you wish to use. (See the online Payment Methods Processing/Procedure overview).

There are three ways of processing for individual transactions:

- Always online (Immediate):

  The transaction request is sent to the acquirer immediately while the customer is connected (appropriate for goods/services delivered online).

  When the online acquirer clearing system is unavailable, all online transactions will be declined.

- Online but switch to offline in intervals when the online acquiring system is unavailable:

  If the merchant wants online processing but does not want to miss out on transactions if the online acquirer clearing system is temporarily unavailable, he can authorise offline processing in these specific circumstances.

  We will store the transactions arriving from the merchant's website during the unavailability of his acquirer and will process them offline as soon as the acquirer clearing system is up again. (Not suitable for services that are triggered online immediately after the transaction!)

- Always offline (Scheduled):

  We register the transaction and process it afterwards (max. 4 hours). This method is slightly faster for the customer, as we do not send the request to the acquirer immediately (can be used for goods/services that do not need to be delivered online). However, the customer will not immediately see the transaction/order result.

  You can configure an offline status change notification in your account, on the Technical information page, "Transaction feedback" tab, in the "HTTP request for status changes" section

(for HTTP requests) or in the "Transaction e-mails" tab, in the "E-mails to the merchant" section (for e-mails). In this way, you can be notified by e-mail and/or http request when the status of a transaction changes to offline in our system.

6 Link between the merchant's website and our payment page

6.1 Order form

The link between the merchant's website and our e-Commerce payment page has to be established on the last page of the shopping basket on the merchant's website, in other words the last page of the merchant's site presented to the customer.

A form with hidden html fields containing the order data must be integrated into this last page. The form action URL will be our (e-Commerce system's) payment processing page.

6.1.1 Form fields

The following section contains the block of code that the merchant needs to paste into the last page of his shopping basket:

```
<form method="post" action="https://e-payment.postfinance.ch/ncol/test/orderstandard.asp" id=form1 name=form1>
<!-- general parameters: see General Payment Parameters -->
<input type="hidden" name="PSPID" value="">
<input type="hidden" name="ORDERID" value="">
<input type="hidden" name="AMOUNT" value="">
<input type="hidden" name="CURRENCY" value="">
<input type="hidden" name="LANGUAGE" value="">
<!-- optional customer details, highly recommended for fraud prevention: see General parameters and optional customer details -->
<input type="hidden" name="CN" value="">
<input type="hidden" name="EMAIL" value="">
<input type="hidden" name="OWNERZIP" value="">
<input type="hidden" name="OWNERADDRESS" value="">
<input type="hidden" name="OWNERCTY" value="">
<input type="hidden" name="OWNERTOWN" value="">
<input type="hidden" name="OWNERTELNO" value="">
<input type="hidden" name="COM" value="">
<!-- check before the payment: see SHA-IN signature -->
<input type="hidden" name="SHASIGN" value="">
<!-- layout information: see Look & Feel of the Payment Page -->
<input type="hidden" name="TITLE" value="">
<input type="hidden" name="BGCOLOR" value="">
<input type="hidden" name="TXTCOLOR" value="">
<input type="hidden" name="TBLBGCOLOR" value="">
<input type="hidden" name="TBLTXTCOLOR" value="">
<input type="hidden" name="BUTTONBGCOLOR" value="">
```

```
<input type="hidden" name="BUTTONTXTCOLOR" value="">
<input type="hidden" name="LOGO" value="">
<input type="hidden" name="FONTTYPE" value="">
<!-- dynamic template page: see Look & Feel of the Payment Page -->
<input type="hidden" name="TP" value="">
<!-- payment methods/page specifics: see Payment method and payment page specifics -->
<input type="hidden" name="PM" value="">
<input type="hidden" name="BRAND" value="">
<input type="hidden" name="WIN3DS" value="">
<input type="hidden" name="PMLIST" value="">
<input type="hidden" name="PMLISTTYPE" value="">
<!-- link to your website: see Default reaction -->
<input type="hidden" name="HOMEURL" value="">
<input type="hidden" name="CATALOGURL" value="">
<!-- post payment parameters: see Redirection depending on the payment result -->
<input type="hidden" name="COMPLUS" value="">
<input type="hidden" name="PARAMPLUS" value="">
<!-- post payment parameters: see Direct feedback requests (Post-payment) -->
<input type="hidden" name="PARAMVAR" value="">
<!-- post payment redirection: see Redirection depending on the payment result -->
<input type="hidden" name="ACCEPTURL" value="">
<input type="hidden" name="DECLINEURL" value="">
<input type="hidden" name="EXCEPTIONURL" value="">
<input type="hidden" name="CANCELURL" value="">
<!-- optional operation field: see Operation -->
<input type="hidden" name="OPERATION" value="">
<!-- optional extra login detail field: see User field -->
<input type="hidden" name="USERID" value="">
<!-- Alias details: see Alias Management documentation -->
<input type="hidden" name="ALIAS" value="">
<input type="hidden" name="ALIASUSAGE" value="">
<input type="hidden" name="ALIASOPERATION" value="">
<input type="submit" value="" id="submit2" name="SUBMIT2">
</form>
```

You can find an example (test page) illustrating the last page of a merchant's shopping basket at: https://e-payment.postfinance.ch/ncol/test/teststd.asp.

The merchant can copy and paste the html code of the form at the bottom of this test page into his shopping basket page. The values in the fields need to be replaced by the merchant's account values.

Some fields, such as the ORDERID and AMOUNT, must be assigned dynamically.

6.1.2 Form action

<form method="post" action="https://e-payment.postfinance.ch/ncol/test/orderstandard.asp" id=form1 name=form1>

In the production (PROD) environment, the URL for the action will be https://e-payment.postfinance.ch/ncol/prod/orderstandard.asp.

IMPORTANT

When you switch to your production account you must replace "test" with "prod" so the action of the form will be https://e-payment.postfinance.ch/ncol/prod/orderstandard.asp. If you forget to change the action of your form, once you start in production with real orders, your transactions will be sent to the test environment and thus will not be sent to the acquirers/banks.

6.2 General parameters and optional customer details

The general parameters are the parameters that have to be sent with each transaction in order for us to be able to process it.

Although the mandatory parameters are the PSPID, ORDERID, AMOUNT, CURRENCY and LANGUAGE value, we nevertheless strongly recommend you also send us some optional customer details such as the customer name (CN), customer's e-mail (EMAIL), address (OWNERADDRESS), town (OWNERTOWN), postcode (OWNERZIP), country (OWNERCTY) and telephone number (OWNERTELNO), as they can be useful tools for combating fraud.

These optional customer details will also be stored with the transaction at our end and can be analysed in your administration module when you look up the transaction details.

6.2.1 Hidden fields

The following hidden fields are used to transmit the general parameters to our system:

<input type="hidden" name="PSPID" value="">

<input type="hidden" name="ORDERID" value="">

<input type="hidden" name="AMOUNT" value="">

<input type="hidden" name="CURRENCY" value="">

<input type="hidden" name="LANGUAGE" value="">

<input type="hidden" name="CN" value="">

<input type="hidden" name="EMAIL" value="">

<input type="hidden" name="OWNERZIP" value="">

<input type="hidden" name="OWNERADDRESS" value="">

<input type="hidden" name="OWNERCTY" value="">

<input type="hidden" name="OWNERTOWN" value="">

<input type="hidden" name="OWNERTELNO" value="">

<input type="hidden" name="COM" value="">

Field	Usage
PSPID	Your affiliation name in our system
ORDERID	Your unique order number (merchant reference). The system checks that a payment has not been requested twice for the same order. The ORDERID has to be assigned dynamically.

Field	Usage
AMOUNT	Amount to be paid MULTIPLIED BY 100 since the format of the amount must not contain any decimals or other separators. The amount must be assigned dynamically.
CURRENCY	ISO alpha order currency code, for example: EUR, USD, GBP, CHF, ...
LANGUAGE	Language of the customer, for example: en_US, nl_NL, fr_FR, ...
CN	Customer name. It will be pre-initialised (but still editable) in the cardholder name field of the credit card details.
EMAIL	Customer's e-mail address
OWNERADDRESS	Customer's street name and number
OWNERZIP	Customer's postcode
OWNERTOWN	Customer's town/city name
OWNERCTY	Customer's country
OWNERTELNO	Customer's telephone number
COM	Order description

For further technical details about these fields, please refer to the online Parameter Cookbook.

7 Security: Check before the Payment

Best practice: SHA signature

7.1 Referrer

Our system checks the origin of the payment request, i.e. which URL the order comes from. This URL is called the referrer.

7.1.1 Configuration

The merchant must fill in the referrer/URL of the page containing the order form with the hidden fields in his account's Technical information page, "Data and origin verification" tab, "Checks for e-Commerce" section.

The URL(s) must always start with http:// or https://. You can enter the full URL or simply the domain name; the latter will result in all subdirectories and pages of that domain being accepted.

Several URLs can be entered, should the merchant have different domains, e.g. http://www.mysite.com;http://www.mysite.net;http://www.secure.mysite.com. The URLs must be separated by a semicolon with no spaces before or after the semicolon.

If you perform a test transaction from our test page, please remember to enter our site's URL as a referrer, otherwise you will receive an error.

7.1.2 Possible errors

Possible errors related to the referrer are *"unknown order/1/r"* and *"unknown order/0/r"*. Please refer to Troubleshooting for more information about these errors.

7.1.3 Limitations

Although the referrer allows our system to identify the origin of an order, it does not guarantee the integrity of the data.

Therefore, our system requires the use of an SHA signature.

7.2 SHA-IN signature

This technique is based on the principle of the merchant's server generating a unique character string, hashed with the SHA algorithm, for each order. The result of this hash is then sent to us in the hidden fields of the merchant's order page. Our system reconstructs this signature to check the data integrity of the order information sent to us in the hidden fields. For further details about the SHA signature, please refer to Appendix: SHA.

7.3 IP address check

The IP address field in the Technical information page, "Data and origin verification" tab, "Checks for DirectLink and automatic Batch" section only has to be completed if, in addition to his e-Commerce connection, there is a server-to-server connection with our system (i.e. requests on orderdirect.asp, maintenancedirect.asp, querydirect.asp, AFU_agree.asp).

If not used, it can be left empty. (Please refer to the DirectLink / Batch Advanced documentation).

8 Look and feel of the payment page

Best practice: Static template

When our e-Commerce system requests the customer for his credit card details, the customer is on our secure server.

There are two types of information on the payment process page: static information (e.g. the merchant's logo) and payment detail information (e.g. order reference, fields where the customer enters his card details, etc.).

The static information originates from our system's common layout or a specific merchant template page (as explained below). Our system adds the payment details dynamically for each transaction. The look and feel of these payment details may however be adapted by the merchant using html styles.

There are two ways to customise the payment process page design to maintain the look and feel of the merchant's site during the payment process: using a static or a dynamic template page.

8.1 Payment page layout (Static template)

The static template page is a common template on our side, but the merchant can change the look & feel of some elements on the payment page or add his logo by simply adding some hidden fields in the form he sends us.

The following hidden fields are used to transmit the look & feel parameters to our system:

```
<input type="hidden" name="TITLE" value="">
<input type="hidden" name="BGCOLOR" value="">
<input type="hidden" name="TXTCOLOR" value="">
<input type="hidden" name="TBLBGCOLOR" value="">
<input type="hidden" name="TBLTXTCOLOR" value="">
<input type="hidden" name="BUTTONBGCOLOR" value="">
<input type="hidden" name="BUTTONTXTCOLOR" value="">
<input type="hidden" name="LOGO" value="">
<input type="hidden" name="FONTTYPE" value="">
```

Field	Usage	Default value
TITLE	Title and header of the page	_
BGCOLOR	Background colour	white
TXTCOLOR	Text colour	black
TBLBGCOLOR	Table background colour	white
TBLTXTCOLOR	Table text colour	black
BUTTONBGCOLOR	Button background colour	_
BUTTONTXTCOLOR	Button text colour	black

Field	Usage	Default value
FONTTYPE	Font family	Verdana
LOGO	URL/filename of the logo you want to display at the top of the payment page, next to the title. The URL must be absolute (i.e. contain the full path), it cannot be relative. The logo needs to be stored on a secure server (see Secure environment padlock). If you do not have a secure environment to store your image, you can send a JPG, PNG or GIF file (and your PSPID) to merchanthelp@postfinance.ch Please contact our customer care Merchanthelp, Tel. +41 (0)848 38 24 23, E-Mail: merchanthelp@postfinance.ch to activate the "Logo Hosting" option in your Account. If the logo is stored on our servers, the URL will be: https://e-payment.postfinance.ch/images/merchant/*[PSPID]*/*[image]*	_

For more technical details about these fields, please refer to the online Parameter Cookbook.

The colours can be specified by their hexadecimal code (#FFFFFF) or their name (white). We recommend you check first how the colours you want to use appear in different browsers.

8.1.1 iPhone static template

We have developed a specific template for iPhones on our platform. In order to use our static iPhone template, you need to transmit the URL of the iPhone template page using the following hidden field and value:

```
<input type="hidden" name="TP" value="PaymentPage_1_iPhone.htm">
```

IMPORTANT

We can only guarantee that our secure payment pages are iPhone compatible. We cannot guarantee that all external pages accessible via our payment pages, e.g. third-party or bank websites, are iPhone compatible.

The data entry interface is especially designed for the small iPhone screen. The look & feel can be customised to the merchant's needs by simply adding some hidden fields in the form he sends us. The following hidden fields are used to transmit the look & feel parameters for the iPhone template to our system:

```
<input type="hidden" name="TITLE" value="">
<input type="hidden" name="BGCOLOR" value="">
<input type="hidden" name="TXTCOLOR" value="">
<input type="hidden" name="TBLBGCOLOR" value="">
<input type="hidden" name="TBLTXTCOLOR" value="">
<input type="hidden" name="HDTBLBGCOLOR" value="">
```

<input type=”hidden” name=”HDTBLTXTCOLOR” value=””>

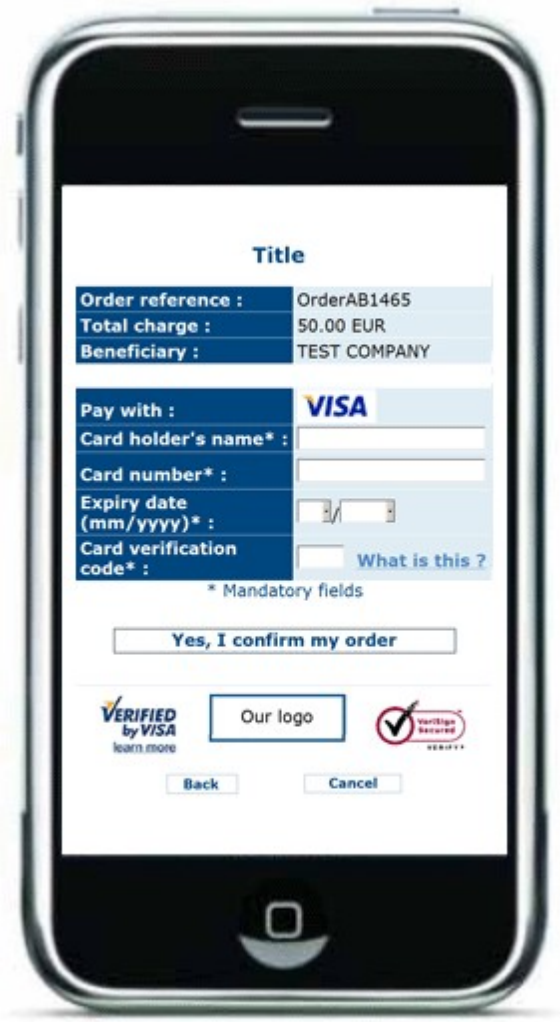
<input type=”hidden” name=”HDFONTTYPE” value=””>

<input type="hidden" name="BUTTONBGCOLOR" value="">

<input type="hidden" name="BUTTONTXTCOLOR" value="">

<input type="hidden" name="FONTTYPE" value="">

Field	Usage	Default value
TITLE	Title of the page	_
BGCOLOR	Background colour	#FFFFFF
TXTCOLOR	Text colour	#00467F
TBLBGCOLOR	Background colour for the right columns	#E1EDF4
TBLTXTCOLOR	Text colour for the right columns	#000000
HDTBLBGCOLOR	Background colour for the left columns	#00467F
HDTBLTXTCOLOR	Text colour for the left columns	#FFFFFF
HDFONTTYPE	Font family for the left columns	Verdana
BUTTONBGCOLOR	Button background colour	#FFFFFF
BUTTONTXTCOLOR	Button text colour	#00467F
FONTTYPE	Font family	Verdana



8.2 Template-based page layout (Dynamic template)

The dynamic template page is an advanced technique for customising the design of the payment pages. Dynamic template usage is restricted to certain subscriptions. If you are interested in this option and it is not present in the options list of your subscription page in your account, please contact our customer care Merchanthelp. Tel. +41 (0)848 38 24 23, E-Mail: merchanthelp@postfinance.ch.

When the merchant uses a dynamic template page, he fully designs his own template page, leaving just one area in that page to be completed by our system. The URL of the merchant's template page needs to be sent to us in the hidden fields for each transaction. Please bear in mind that using a dynamic template page involves an additional request from our system to look up your template page. This increases the time needed for the payment process.

8.2.1 Hidden fields

The following hidden field is used to transmit the URL of your template page:

<input type="hidden" name="TP" value="">

Field	Usage
TP	URL of the merchant's dynamic template page (the page must be hosted at the

Field	Usage
	merchant's end). The URL must be absolute (contain the full path), it cannot be relative. Do not specify any ports in your URL, we only accept ports 443 and 80. Any component included in the template page must also have an absolute URL.

For further technical details about this field, please refer to the online Parameter Cookbook.

8.2.2 Payment zone

The dynamic template page can be designed completely to your liking. The only requirement is that it must contain the string "$$$PAYMENT ZONE$$$" indicating the location where our e-Commerce module can add its fields dynamically. It must therefore contain at least the following:

```
<html>
$$$PAYMENT ZONE$$$
</html>
```

IMPORTANT

Do not use BASE tags, frames or FORM tags to encapsulate the $$$PAYMENT ZONE$$$ string.

Example

An example of a dynamic template page is available at the following address:

https://e-payment.postfinance.ch/ncol/template_standard.htm

8.2.3 Dynamic behaviour

The same template page can be used for all orders, or it may be generated dynamically by the merchant's application according to the order parameters.

To generate the template page dynamically, the merchant can choose between creating a specific page for the order, whose URL is transmitted in the hidden fields, or using a fixed URL but returning a result derived from the order number. To allow this, our system adds the main payment data – including the merchant's order reference number (cf. Processing after payment) – when it retrieves the template page:

HTTP request = url_page_template ?ORDERID=...&AMOUNT=...&CURRENCY=...

8.2.4 Style sheets

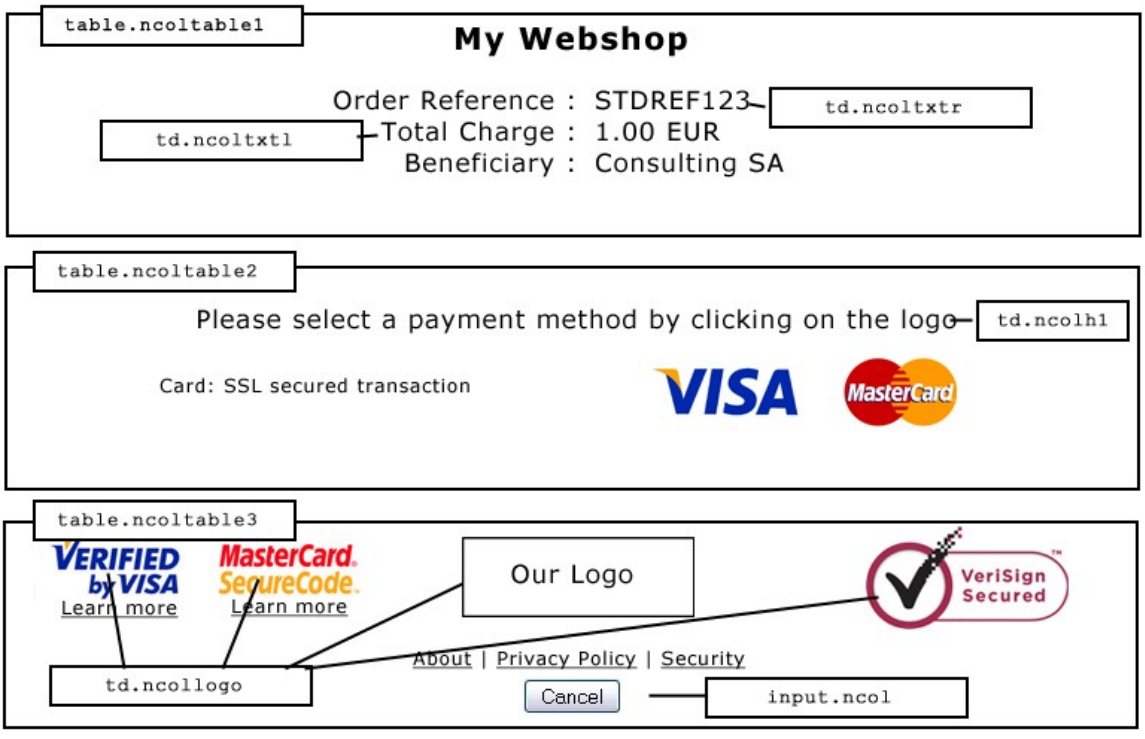
You can personalise the look & feel of your payment pages by adding style sheets to your template page.

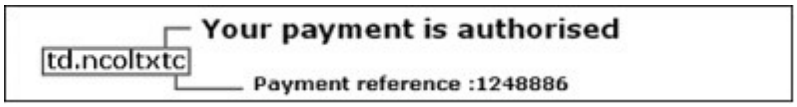
We have defined a class for the various types of tables and cells within our tables as well as a class for the submit buttons. You will need to add the following block of code between the tags <head></head> and change the properties of those classes to fit to the look & feel of your site (cf. the example of the aforementioned template page):

```
<style type="text/css">
<!--
```

```
td.ncolh1 {background-color : #006600; color : yellow; font-family : verdana}
td.ncoltxtl {background-color : #ffffcc; color : black; text-align : right; font-weight : bold}
td.ncoltxtl2 {background-color : #ffffcc; color : black; text-align : right; font-weight : bold}
td.ncoltxtr {background-color : #ffffcc; color : black; text-align : left; font-weight : bold}
td.ncoltxtc {background-color : #ffffcc; color : black; text-align : center; font-weight : bold}
td.ncolinput {background-color : #ffffcc; color : black}
td.ncolline1 {background-color : #ffffff; color : black}
td.ncolline2 {background-color : #ffffcc; color : black}
input.ncol {background-color : #006600; color : white}
td.ncollogoc {background-color : #ffffcc; color : black; text-align : center; font-weight : bold}
table.ncoltable1 { background-color: #ffffcc;  }
table.ncoltable2 { background-color: #ffffcc;  border-width : medium; border-color : green; }
table.ncoltable3 { background-color: #ffffcc;  }
-->
</style>
```

When you enter your own layout instructions, you must adhere to the cascading style sheet syntax. We strongly advise you to test it in various browsers, as the way they handle style may differ enormously.





8.2.5 Performance

Our system is configured with a 5-second timeout for the request to retrieve the merchant's dynamic template page.

Please contact our customer care Merchanthelp, Tel. +41 (0)848 38 24 23, E-Mail: merchanthelp@postfinance.ch, to change this timeout (HTTPTimeOut).

If a timeout occurs, our system will use the merchant's static template instead.

If no static template is configured, our system will use the PostFinance static template as a last resort.

IMPORTANT: This HTTPTimeOut field has an impact on both dynamic template requests and post-payment feedback requests (see Direct feedback requests (Post-payment)). Consequently, if the merchant were to decide to change it to e.g. 15 seconds, the feedback request timeout will also increase to 15 seconds.

For each order, our system performs a request to retrieve your dynamic template page. If you have high transaction volumes or you have a large template page (e.g. your dynamic template page contains a large number of images), these HTTP requests could take a long time. Please contact our customer care Merchanthelp for a solution if you have high transaction volumes.

8.3 Template security control

To protect the merchant's customers against fraudulent activities, such as the manipulation of sensitive card data (card number, CVC), different security checks for the merchant template were made available.

In the merchant's Technical information page, "Global security parameters" tab, "Template" section, the following settings can be configured:

- Enable Javascript check on template
  The merchant can enable this feature to detect Javascript usage on the template page. If Javascript is detected, the template will be blocked and the default template will be used instead.

- Allow usage of static template
  If the merchant selects *Allow usage of static template*, it is mandatory to enter one or more values in the *Trusted static template name*. These values will then be used as input for a check that will compare it with the information received by PostFinance during the payment process.

- Allow usage of dynamic template
  If the merchant selects *Allow usage of dynamic template*, it is mandatory to configure the *Trusted website host name hosting the dynamic template* field. This field can contain multiple web hosts, separated by semicolons, but they should all contain the full URL, e.g. http://

www.website.com/. The sub-directories can be left out, so if the dynamic template is http://www.website.com/templates/nl/template1.htm, it suffices to configure http://www.website.com as trusted web host.

Additionally the merchant can also configure one or more fully trusted dynamic template urls, separated by semicolons, in the *Trusted dynamic template url* field.

If a dynamic template is submitted with a transaction, but dynamic templates are not allowed, then the template will be blocked and our system will use the static template instead.
If there is no static template configured, or if the static template is also not allowed, then the default PostFinance template will be used.

IMPORTANT

If a default static or dynamic template is configured in the merchant's account (requested beforehand to our customer care Merchanthelp), then one of the 2 options (*Allow usage of static template* / *Allow usage of dynamic template)* must be enabled. The template URL should also be configured as a *trusted template*. If the *Trusted static template name* and *Trusted dynamic template url* input fields are left blank, by default all templates are trusted.

By default, *Enable JavaScript check on template* an d *Allow usage of static template* are enabled. The *Trusted static template name* will be pre-configured with the merchant website host name.

8.4 Secure environment padlock

The URL used to connect the customer to our platform uses a secure protocol (https). All the communication between our e-Commerce platform and the customer is securely encrypted.

However, the small padlock on the browser – which indicates to the customer that the site is secure – may not be displayed if some elements (e.g. images) in the template page are not located on a secure server or if some frames on the screen show pages that do not originate from secure sites.

Even if the payment processing communication is encrypted, most browsers will not recognise a secure connection unless all the elements on the screen, including images, sounds, etc. come from secure sites.

For merchants who do not have a secure site, please bear in mind the following rules:

1. Do not use frames for the payment pages: you can refresh the entire screen with a template page that looks as if you are using frames or allow the payment to be processed in a new window.

2. Do not link files to the template page (<link> tag) that you use for the payment page. Instead, use the <style> and <script> tags to include styles and scripts into the template page.

3. Make sure the images in your template are stored on a secure server (the template page can be on a non-secure server, however the images cannot). We offer hosting for these elements (see the image hosting options in your account).

8.5 Cancel button

By default, a “Cancel” button is available on our secure payment pages, to allow the customer to cancel/interrupt the transaction. If you wish to hide the “Cancel” button, you can enable the corresponding box in the “Payment page layout” tab of the Technical information page in your account.

8.6 Payment page in iframe

Iframes allow the merchant to integrate an external web page (such as the payment page) on his website, while maintaining his own URL in the browser.

However, in the current context iframe also has very significant drawbacks:

- Since the URL is the merchant's URL, it could be a simple http (instead of an https) and the padlock icon may not appear in the browser. This could cause customers to doubt the security of the webshop.
- Some payment methods (like Giropay, Sofort, Bancontact/Mister Cash, PayPal, etc.) use redirections, which may give poor layout results and/or navigation misbehaviour.

As a result, PostFinance discourages the use of iframe, and the usage thereof is the merchant's responsibility. PostFinance strongly encourages the use of a Dynamic Template instead.

If you still wish to pursue the integration of iframe, we strongly recommend the following:

- Use iframe only on the payment method selection page (and beyond)
- Use pop-ups for external payment methods whenever possible, to ensure the visibility of third-party web applications.

9 Transaction feedback to the customer and the merchant

Best practice: Redirection with parameters on the accept-/exception-/cancel-/declineurl (cf. Database update option) with a deferred post-payment feedback request as a backup (cf. Combination with a feedback request) and a check of the SHA-OUT signature by the merchant (cf. SHA-OUT signature (for feedback requests and redirections))

The feedback to the merchant and his customer – i.e. when the payment is accepted, if the customer cancelled the payment or the acquirer declined the payment more than the maximum permissible number of times – depends on the parameters defined by the merchant.

9.1 Default reaction

If the merchant has not specified a reaction, our system will display the following, standard message to the customer: "Authorised" or "The transaction has been denied". This message is inserted into the template page.

In this page, we also add a link to the merchant's website and/or the merchant's catalogue, using the URLs (HOMEURL and CATALOGURL) sent in the hidden fields of the order form. If the URLs are not specified in the hidden fields, our system will use the URL stated in the administration module of your account.

9.1.1 Hidden fields

The following hidden fields are used to transmit the URLs:

```
<input type="hidden" name="CATALOGURL" value="">
<input type="hidden" name="HOMEURL" value="">
```

Field	Usage
CATALOGURL	(Absolute) URL of your catalogue. When the transaction has been processed, your customer is requested to return to this URL via a button.

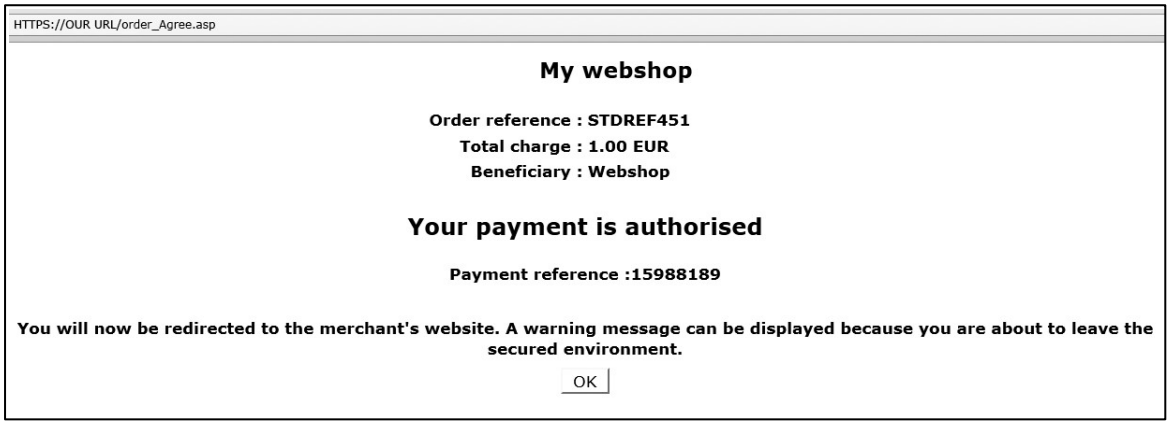
Field	Usage
HOMEURL	(Absolute) URL of your home page. When the transaction has been processed, your customer is requested to return to this URL via a button. When you send the value “NONE”, the button leading back to the merchant’s site will be hidden.

For further technical details about these fields, please refer to the online Parameter Cookbook.

9.2 Redirection depending on the payment result

In the hidden fields of the order form, the merchant can send four URLs (ACCEPTURL, EXCEPTIONURL, CANCELURL and DECLINEURL) to which our system will redirect the customer at the end of the payment process. The merchant can also configure these URLs in the "Transaction feedback" tab, "HTTP redirection in the browser" section of the “Technical information” page.

Example of the use of an "ACCEPTURL" to personalise the customer’s response:



9.2.1 Hidden fields

The following hidden fields are used to transmit the URLs:

```
<input type="hidden" name="ACCEPTURL" value="">
<input type="hidden" name="DECLINEURL" value="">
```

```
<input type="hidden" name="EXCEPTIONURL" value="">
<input type="hidden" name="CANCELURL" value="">
```

Field	Usage
ACCEPTURL	URL of the web page to display to the customer when the payment has been authorised (status 5), stored (status 4), accepted (status 9) or is waiting to be accepted (pending status 41, 51 or 91).
DECLINEURL	URL of the web page to show the customer when the acquirer declines the authorisation (status 2 or 93) more than the maximum permissible number of times.
EXCEPTIONURL	URL of the web page to display to the customer when the payment result is uncertain (status 52 or 92). If this field is empty, the customer will see the ACCEPTURL instead.
CANCELURL	URL of the web page to display to the customer when he cancels the payment (status 1). If this field is empty, the customer will see the DECLINEURL instead.

For further technical details about these fields, please refer to the online Parameter Cookbook.

9.2.2 Browser alert notification

When a customer returns from our secure payment pages to the merchant's website, he might get a browser alert, warning him that he is entering a non-secure environment (since he is moving from an https:// environment to an http:// environment). When we detect a redirection to the merchant's website, we can display a message to notify the customer about the possibility of a risk (see first screenshot in Chapter here), thereby avoiding any undue concern about a browser alert. The merchant can activate this option in the "Transaction feedback" tab, "HTTP redirection in the browser" section of the Technical information page ("I want PostFinance to display a short text to the customer on the secure payment page if a redirection to my website is detected immediately after the payment process").

9.2.3 Database update option

The merchant can use this redirection on the ACCEPT-/EXCEPTION-/CANCEL-/DECLINEURL to trigger automatic back-office tasks such as database updates. When a payment is executed, we can send the transaction parameters on the merchant's ACCEPT-, EXCEPTION-, CANCEL- or DECLINEURL.

The merchant can activate this option in the "Transaction feedback" tab, "HTTP redirection in the browser" section of the Technical information page ("I would like to receive transaction feedback parameters on the redirection URLs").

Please note that we additionally always activate the server-to-server post-payment feedback request (see Transaction Feedback to the Customer and the Merchant) to avoid inconsistencies between orders and payments due to client interactions (e.g. closing the browser before receiving the authorisation confirmation).

9.2.3.1 Feedback parameters

When a payment is executed, we can send the following parameter list to the merchant's ACCEPTURL, EXCEPTIONURL, CANCELURL or DECLINEURL.

Parameter	Value
ORDERID	Your order reference
AMOUNT	Order amount (not multiplied by 100)
CURRENCY	Order currency
PM	Payment method
ACCEPTANCE	Acceptance code returned by acquirer
STATUS	Transaction status (see Appendix: Status overview)
CARDNO	Masked card number
PAYID	Payment reference in our system
NCERROR	Error code
BRAND	Card brand (our system derives this from the card number)
ED	Expiry date
TRXDATE	Transaction date
CN	Cardholder/customer name
SHASIGN	SHA signature calculated by our system (if SHA-OUT configured)

For further technical details about these fields, please refer to the online Parameter Cookbook.

The list of feedback parameters can be longer for merchants who have activated certain options in their accounts, such as the Fraud Detection Module. Please refer to the respective option documentation for more information on extra feedback parameters linked to the option.

Example

https://www.yourwebsite.com/acceptpage.asp?orderID=ref12345&currency=EUR&amount=25&PM=CreditCard&ACCEPTANCE=test123&STATUS=5&CARDNO=XXXXXXXXXXXX1111&PAYID=1136745&NCERROR=0&BRAND=VISA&ED=0514&TRXDATE=12/25/08&CN=John Doe

The merchant can send us two extra parameters in the hidden fields of the order form, in order to retrieve them as feedback parameter after the payment. The following hidden fields are available:

```
<input type="hidden" name="COMPLUS" value="">
<input type="hidden" name="PARAMPLUS" value="">
```

Field	Usage
COMPLUS	Field for submitting a value you would like to be returned in the feedback request.
PARAMPLUS	Field for submitting some parameters and their values you would like to be returned in the feedback request. The field PARAMPLUS is not included in the feedback parameters as such; instead, the parameters/values you submit in this field will be parsed and the resulting parameters added to the http request.

For further technical details about these fields, please refer to the online Parameter Cookbook.

Example

The following are the extra hidden fields sent by the merchant:

```
<input type="hidden" name="COMPLUS" value="12345678912345678912345678 9">
<input type="hidden" name="PARAMPLUS"
value="SessionID=126548354&ShopperID=73541312">
```

resulting in a redirection with the feedback parameters:

```
https://www.yourwebsite.com/acceptpage.asp?[…standard.parameters…]
&COMPLUS=12345678912345678912345678 9&SessionID=126548354&ShopperID=73541312
```

9.2.3.2 Security measures

The redirection process is visible because it is sent via the customer's browser. Consequently, the merchant must use an SHA signature (cf. Appendix: SHA) to verify the contents of the request and prevent customers tampering with the data in the URL field, which could result in fraudulent database updates. If the merchant does not configure a SHA-OUT signature, we shall not send any parameters on his ACCEPT-, EXCEPTION-, CANCEL- or DECLINEURL.

9.2.3.3 Combination with a feedback request

The merchant is obliged to use – in addition to the feedback parameters sent to the ACCEPT-/EXCEPTION-/CANCEL-/DECLINEURL - a deferred/background post-payment feedback request as a fall back option for the redirection (see Direct Feedback Request).

If the communication with the customer is interrupted, for instance when the customer exits his browser window before reaching the ACCEPT-, EXCEPTION-, CANCEL- or DECLINEURL, the merchant will not receive the redirection on the ACCEPT-, EXCEPTION-, CANCEL- or DECLINEURL. However, if the merchant enters a post-payment URL in the "Transaction feedback" tab, "Direct HTTP server-to-server request" section (URL fields) of the Technical information page and sets the timing of the request to "Always deferred (not immediately after the payment)", he will receive a deferred feedback request shortly after the transaction.

For this to work, the merchant's post-payment page must be capable of accepting a request for an order that has already been processed. The merchant will receive this deferred feedback request in any case, even if the redirection on the ACCEPT-, EXCEPTION-, CANCEL- or DECLINEURL was successful. This second request can be ignored if the order status has already been updated in the merchant's database, following the redirection on the ACCEPT-, EXCEPTION-, CANCEL- or DECLINEURL.

9.3 Direct feedback requests (Post-payment)

After the payment, our system can send an http request to a URL specified by the merchant, transmitting the transaction data.

This process, called a "post-sale request", allows the merchant to update his database with the order status, etc. and trigger an "end of order" process (if this has not already been done after a redirection). It is also an alternative way of generating a personal response for the customer in case of specific needs (if this has not already been done via a redirection).

9.3.1 Post-payment URLs and parameters

9.3.1.1 Post-payment URLs

To automate your back-office tasks, you can define the URLs of two executable pages on your site in the "Transaction feedback" tab, "Direct HTTP server-to-server request" section (URL fields) of the Technical information page. One of these settings can be the URL to which the request parameters are sent if the payment's status is accepted, pending or uncertain. The other can be the URL to which the request parameters are sent when the transaction has been cancelled by the client or declined too many times by the acquirer (i.e. more than the maximum permissible number of payment attempts as set in the "Global transaction parameters" tab, "Payment retry" section of the Technical information page). These two URLs may differ, but they may also be identical. You may also enter a URL for the first case but not for the second. Do not specify any ports in your URL; we only accept port 443 and port 80.

If you would also like to receive a deferred HTTP request in the case of a transaction status change, you can set an additional URL in the field in the "Transaction feedback" tab, "HTTP request for status changes" section of the Technical information page (and select the timing for the request). This is similar to a post-payment URL with the difference that it is relevant for potential background processes. You can use the same URL here as the one set in the "Direct HTTP server-to-server request" section, but please bear in mind that there is no point in using it to generate a personal response for the customer in this (background) case.

9.3.1.2 Variable post-payment URLs

If you have a post-payment page configured in the Technical information page in your account, but you have several shops each connected to a specific directory for receiving the post-payment feedback, part of your post-payment URL can be variable.

This variable part can also be used to e.g. "adapt" the feedback request to include session information, passing it as a part of the URL rather than as an additional parameter. This is the case for Intershop platforms or Servlet systems.

The following hidden field should be used:

```
<input type="hidden" name="PARAMVAR" value="">
```

Field	Usage
PARAMVAR	The variable part to include in the URLs used for feedback requests

For further technical details about this field, please refer to the online Parameter Cookbook.

Example

Post-payment URL in the merchant's Technical information page:
https://www.yourwebsite.com/<PARAMVAR>/yourpage.asp

Following is the extra hidden field sent by the merchant:
<input type="hidden" name="PARAMVAR" value="shop1">

Resulting in the following Post-payment URL for the transaction:
https://www.yourwebsite.com/shop1/yourpage.asp

IMPORTANT

Please do not use any special characters in the PARAMVAR field, as they will be URL encoded, and this could create invalid links

9.3.1.3 Feedback parameters

Our http request to your post-payment URL will contain the same feedback parameters as described in Chapter "Feedback Parameters"

9.3.2 Timing of the feedback request

In the "Transaction feedback" tab, in the "Direct HTTP server-to-server request" section of the Technical information of your account, you can choose the timing of the feedback request:

- No request

  The merchant is not allowed to set "No request" since he is obliged to receive post sale requests (see Transaction Feedback to the Customer and the Merchant).

- Always deferred (not immediately after the payment)

  The feedback request will be sent shortly after the end of the payment process. The feedback request will be a background task and cannot be used to send a personalised feedback to the customer on the merchant's website.

  If the merchant does not use his post-payment page to personalise a response for his customer, he can receive the feedback request in the background and deferred.

- Always online (immediately after the payment, to allow customisation of the response seen by the customer)

  The feedback request will be sent "online" sometime between our system's receipt of the acquirer's response and the time it notifies the customer of the payment result.

  In this case, the payment process takes longer for the customer, but the merchant can send a personalised response to the customer.

  The disadvantage of the online post-payment feedback process is that the merchant's system might be detrimentally affected if there are too many requests to his post-payment page (e.g. high per-minute transaction volume) – this could result in long response times before customers receive on-screen feedback.

- Online but switch to a deferred request in intervals when the online requests fail

  This option allows merchants who require online post-payment feedback (to tailor the response displayed to the customer) to have a fall-back option, should the online request on his post-payment page fail. In this case we will retry the feedback request every 10 minutes up to a maximum of four times (deferred). In this way, the merchant does not miss out on the transaction feedback, should the online post-payment feedback request fail, e.g. as a result of temporary server problems at his end. The customer will be displayed the standard transaction feedback from our system (see Default reaction).

9.3.3 Response to the customer

We use a possible reply from your post-payment page to show a feedback (end of transaction page) to your customer.

If your post-payment page replies with: an HTML page (containing an <html> tag) or A redirection (HTTP 302 Object Moved), our system will send this HTML page "as is" to the client browser or perform the redirection, rather than redirecting your customer at the end of your post-payment feedback process to one of the four URLs you may have sent in the hidden fields (ACCEPTURL, EXCEPTIONURL, CANCELURL and DECLINEURL as described here: Redirection depending on the payment result).

Alternatively, if you use none of the above as feedback to your customer, you can have your post-payment page respond with a few lines of text (no <html> tag) which we will include in our standard response, or our system will simply show the standard response (as described in: Default reaction).

9.4 Security: check origin of the request

If you receive a request with parameters from our system, you have two possibilities to check whether the request was in fact sent from our system: an IP address check and an SHA signature.

9.4.1 IP address check (only for feedback requests)

You can configure our IP addresses in your firewall to be certain that the request is coming from one of our servers; alternatively, you can simply test the IP origin in your CGIs.

The IP addresses are published in our Firewall Configuration for the Transaction Platform Traffic configuration guide, available on the "Integration & user manuals" page in your account. Please note that different ranges of possible IP addresses exist and that these IP addresses are subject to change!

9.4.2 SHA-OUT signature (for feedback requests and redirections)

We strongly recommend that you use an SHA signature to verify the contents of a request or redirection; this will e.g. prevent customers from tampering with the data in the URL field which could result in an incorrect database update. For further information about the SHA-OUT signature, please refer to Appendix: SHA.

9.5 Confirmation e-mails

9.5.1 E-mails to the merchant

Our system can send you a payment confirmation e-mail for each transaction (option to configure in the "Transaction e-mails" tab, "E-mails to the merchant" section of the Technical information page).

On the configuration screen, you may also choose to receive e-mails to be notified of transaction status changes.

9.5.2 E-mails to the customer

Our system can send an automatic e-mail to your customer notifying him of the transaction registration. This is a standard e-mail whose contents cannot be changed. The “From” address used when sending the e-mail is the address you entered in the “E-mail address(es) for transaction-related e-mails” field. If you entered more than one e-mail address in this field, the first one will be used.

You can activate this option in the "Transaction e-mails" tab, "E-mails to the customer" section of the Technical Information page. You can also choose to send e-mails to the customer when the data has been captured and when a transaction is refunded, by ticking the corresponding boxes.

In order for this to be possible, you must include the customer's e-mail address in the hidden field:

```
<input type="hidden" name="EMAIL" value="">
```

Field	Usage
EMAIL	Customer’s e-mail address

For further technical details about this field, please refer to the online Parameter Cookbook.

10 Other optional hidden fields

There are a number of other optional hidden fields the merchant can send us for specific purposes. This chapter provides an overview of these hidden fields and their usage.

10.1 Payment method and payment page specifics

10.1.1 Payment method selection on the merchant's side

10.1.1.1 Showing a specific payment method

When a customer visits our secure payment page, he will be shown a list of the payment methods the merchant has activated in his account. If the customer has to select the payment method on the merchant's website instead of on our payment page, he can send us the payment method name and brand (only used when the payment method is "CreditCard") in the hidden fields, so we will only show this particular payment method on our payment page and will only allow payment by this payment method.

The hidden fields are the following:

```
<input type="hidden" name="PM" value="">
<input type="hidden" name="BRAND" value="">
```

Field	Usage
PM	Payment method
BRAND	Credit card brand

For further technical details about these fields, please refer to the online Parameter Cookbook.

Examples

* Hidden fields in the event that your customer has selected VISA on your site:

```
<input type="hidden" name="PM" value="CreditCard ">
<input type="hidden" name="BRAND" value="VISA">
```

* Hidden fields in the event that you only want your customer to pay by credit card (for instance, if you also have other payment methods you don't wish to show):

```
<input type="hidden" name="PM" value="CreditCard ">
<input type="hidden" name="BRAND" value="">
```

* Hidden fields in the event that your customer has selected iDEAL on your site:

```
<input type="hidden" name="PM" value="iDEAL">
<input type="hidden" name="BRAND" value="">
```

10.1.1.2 Allowing the customer to choose another payment method: backurl

If the customer selects the payment method on the merchant's website, we will only show the selected payment method on our payment page.

If the payment with this payment method is unsuccessful and the customer would like to try using another payment method, he will not be presented with a list of the merchant's payment methods on our secure payment pages, as the payment method selection took place on the merchant's website and not on our secure payment pages.

In this case the merchant can use the "BACKURL" to redirect the customer to a URL on the merchant's website, where he can select another payment method. When the customer clicks the "Back" button on our secure payment page, after authorisation has been declined or after having cancelled from a third-party or bank website, we redirect him to the URL entered by the merchant as "BACKURL".

IMPORTANT

The back button described in this section is the back button in our secure payment pages, NOT the back button in your browser.

You can enter the "BACKURL" specified in the "Payment page layout" tab of the "Technical information" page in your account. However if you prefer not to use the same one, you can also send us a specific "BACKURL" in the hidden transaction fields.

The "BACKURL" sent in the hidden fields will override the general "BACKURL" entered in the "Payment page layout" tab of the "Technical information" page in your account. You can send the "BACKURL" in the following hidden field:

<input type="hidden" name="BACKURL" value="">

Field	Usage
BACKURL	URL of the web page to display to the customer when he clicks the "Back" button on our secure payment page.

For further technical details about this field, please refer to the online Parameter Cookbook.

If the customer selects his payment method on our secure payment pages and not on the merchant's website, the "BACKURL" is not taken into account. When a customer clicks the "Back" button on our secure payment page, he will simply be redirected to our secure payment method selection page containing a list of the merchant's payment methods.

10.1.2 Showing a specific list of payment methods

If the customer is to select the payment method from a specific list of payment methods on our payment page, the merchant can send us this list of payment methods in the hidden fields, so we will only show these specific payment methods on our payment page.

The hidden field is the following:

<input type="hidden" name="PMLIST" value="">

Field	Usage
PMLIST	List of selected payment methods and/or credit card brands. Separated by a ";" (semicolon).

For further technical details about these fields, please refer to the online Parameter Cookbook.

Example

* The hidden field in the event that you only want your customer to choose between VISA and iDEAL on our payment page (i.e. if you also have other payment methods that you don't want to be displayed) will be:

```
<input type="hidden" name="PMLIST" value="VISA;iDEAL">
```

10.1.3 Excluding specific Payment Methods

If the merchant does not wish to present a specific brand to the cardholder, he can use a hidden field to do so.

This is particularly useful for sub-brands, when a merchant wants to accept a brand (e.g. MasterCard) but not one of its sub-brands (e.g. Maestro)

The hidden field is the following:

<input type="hidden" name="EXCLPMLIST" value="">

Field	Usage
EXCLPMLIST	List of payment methods and/or credit card brands that should NOT be shown. Separated by a ";" (semicolon).

For further technical details about these fields, please refer to the online Parameter Cookbook.

10.1.4 Layout of the payment methods

You can arrange the layout/list of the payment methods on our payment page using the following hidden field:

<input type="hidden" name="PMLISTTYPE" value="">

Field	Possible values
PMLISTTYPE	The possible values are 0, 1 and 2: 0: Horizontally grouped logos with the group name on the left (default value) 1: Horizontally grouped logos with no group names 2: Vertical list of logos with specific payment method or brand name

For further technical details about this field, please refer to the online Parameter Cookbook.

10.1.5 3-D secure

If you are working with 3-D Secure, you can choose how you want the identification page to be displayed to the customer by sending us an extra parameter in the hidden fields.

The hidden field is the following:

<input type="hidden" name="WIN3DS" value="">

Field	Possible values
WIN3DS	"MAINW": to display the identification page in the main window (default value) "POPUP": to display the identification page in a POPUP window and return to main window at the end

For further technical details about this field, please refer to the online Parameter Cookbook.

IMPORTANT

Please note that for some payment methods (e.g. Visa, MasterCard, JCB, etc.), the 'POPUP' value is not allowed and will be converted into 'MAINW' by the system. We recommend explicitly testing the behaviour of this field for every payment method.

10.2 Operation

IMPORTANT

The ability to work in two stages (authorisation + data capture) depends on the payment methods you wish to use. (See the online Payment Methods Processing/Procedure overview).

If you prefer not to use the same operation code as selected in the "Global transaction parameters" tab, in the "Default operation code" section of the "Technical Information" page in your account for a given transaction, you can send us a specific operation code for this transaction.

The operation code you send us in the hidden fields will override the default operation code selected in the "Default operation code" section of the "Technical information" page in your account. You can send the operation code with the following hidden field:

<input type="hidden" name="OPERATION" value="">

Field	Usage
OPERATION	Operation code for the transaction. Possible values for new orders: ▪ RES: request for authorisation ▪ SAL: request for sale (payment)

For further technical details about this field, please refer to the online Parameter Cookbook.

IMPORTANT

In order for this parameter to be taken into account by our system, it needs to be included in the SHA signature calculation for the transaction. Please refer to Appendix: SHA for more information on SHA.

10.3 User field

If you have multiple users in your account and you want to register transactions associated with a specific user (e.g. for call centre agents logging transactions via e-Commerce), you can send the USERID in the following hidden field:

<input type="hidden" name="USERID" value="">

Field	Usage
USERID	The username specified in the account's user management page

For further technical details about this field, please refer to the online Parameter Cookbook.

This field is just an informative field to add a USERID to a specific transaction. We do not perform any check at our end to establish e.g. if there have been password errors for this user. The only check we perform is to verify that the USERID is valid. If the USERID does not exist, we will replace it by the default USERID of the account (PSPID).

Please refer to the online Parameter Cookbook for other fields.

10.4 Delivery & Invoicing Data

Some payment methods may require you to submit delivery information. You may do so by using the following fields:

Field	Type / Length	Usage
ORDERSHIPMETH	AN(25)	Delivery method
ORDERSHIPCOST	N	Delivery cost
ORDERSHIPTAXCODE	N	Delivery tax code
CUID	AN(50)	Social security number / company registration number
CIVILITY	AN(10)	Invoicing title (Mr., Mrs, Dr., etc.)
ECOM_BILLTO_POSTAL_NAME_FIRST	AN(35)	Invoicing first name
ECOM_BILLTO_POSTAL_NAME_LAST	AN(35)	Invoicing last name
ECOM_BILLTO_POSTAL_STREET_LINE1	AN(35)	Invoicing address
ECOM_BILLTO_POSTAL_STREET_NUMBER	AN(10)	Invoicing street number
ECOM_BILLTO_POSTAL_POSTALCODE	AN(10)	Invoicing postcode
ECOM_BILLTO_POSTAL_CITY	AN(40)	Invoicing city
ECOM_BILLTO_POSTAL_COUNTRYCODE	AN(2)	Invoicing country code (BE, FR, NL, DE, etc.)
ECOM_SHIPTO_POSTAL_NAME_PREFIX	AN(10)	Delivery civil status (Mr., Mrs, etc.)
ECOM_SHIPTO_POSTAL_NAME_FIRST	AN(35)	Delivery first name
ECOM_SHIPTO_POSTAL_NAME_LAST	AN(35)	Delivery last name
ECOM_SHIPTO_POSTAL_STREET_LINE1	AN(35)	Delivery address
ECOM_SHIPTO_POSTAL_STREET_NUMBER	AN(10)	Delivery street number
ECOM_SHIPTO_POSTAL_POSTALCODE	AN(10)	Delivery postcode
ECOM_SHIPTO_POSTAL_CITY	AN(25)	Delivery city
ECOM_SHIPTO_POSTAL_COUNTRYCODE	AN(2)	Delivery country code
ECOM_SHIPTO_ONLINE_EMAIL	AN(50)	Delivery e-mail address
ECOM_SHIPTO_DOB	yyyy-MM-dd	Date of birth

More details about these fields can be obtained from our online Parameter Cookbook.

10.5 Order Details

Some payment methods may require you to submit detailed order information. You may do so using the following fields:

Field	Type/Length	Usage
ITEMIDX	Alphanum(15)	Item identification (replace X with a number to send multiple items: ITEMID1, ITEMID2, etc.)
ITEMNAMEX	Alphanum(50)	Item name (replace X with a number to send multiple items: ITEMNAME1, ITEMNAME2, etc.)
ITEMPRICEX	Numeric	Item price (replace X with a number to send multiple items: ITEMPRICE1, ITEMPRICE2, etc.)
ITEMQUANTX	Numeric	Item quantity (replace X with a number to send multiple items: ITEMQUANT1, ITEMQUANT2, etc.)
ITEMVATCODEX	Numeric	Item VAT code (replace X with a number to send multiple items: ITEMVATCODE1, ITEMVATCODE2, etc.)

More details about these fields can be obtained from our online Parameter Cookbook.

11 Appendix: SHA

For each order, the merchant's server generates a unique character string, hashed with the SHA-1 algorithm developed by NIST (see here).

IMPORTANT: Our system requires the use of an SHA signature!

11.1 SHA-IN signature

This string is constructed by concatenating the values of the fields sent with the order (sorted alphabetically, in the format 'parameter=value'), followed by a passphrase. The passphrase is defined in the merchant's Technical information page, under the tab "Data and origin verification", section "Checks for e-Commerce." Please note that these values are all case sensitive when compiled to form the string before the hash!

IMPORTANT

- All parameters that you send (and that appear in the list in Appendix: List of parameters to be included in SHA IN calculation), will be included in the string to be hashed.
- All parameter names should be in UPPERCASE (to avoid any case confusion).
- All parameters need to be arranged alphabetically.
- Note that some sorting algorithms place special characters in front of the first letter of the alphabet, while others place them at the end. If in doubt, please respect the order as displayed in the SHA list.
- Parameters that do not have a value should NOT be included in the string to hash
- When you choose to transfer your test account to production via the link in the account menu, a random SHA-IN passphrase will be automatically configured in your production account.
- For extra safety, we request that you to use different SHA passphrases in test and production. Please note that if they are found to be identical, your TEST passphrase will be changed by our system (you will of course be notified)

When you hash the string composed with the SHA algorithm, a hexadecimal digest will be returned. The length of the SHA Digest is 40 characters for SHA-1, 64 for SHA-256 and 128 for SHA-512. This result should be sent to our system in your order request, using the "SHASIGN" field.

Our system will recompose the SHA string based on the received parameters and compare the merchant's Digest with our generated Digest. If the result is not identical, the order will be declined. This check ensures the accuracy and integrity of the order data.

You can test your SHASIGN here.

Example of a SHA-1-IN calculation with only basic parameters

Parameters (in alphabetical order)
AMOUNT: 15.00 -> 1500
CURRENCY: EUR
LANGUAGE: en_US
ORDERID: 1234
PSPID: MyPSPID

SHA-IN passphrase (in Technical information)
Mysecretsig1875!?

String to hash
AMOUNT=1500Mysecretsig1875!?CURRENCY=EURMysecretsig1875!?
LANGUAGE=en_USMysecretsig1875!?ORDERID=1234Mysecretsig1875!?
PSPID=MyPSPIDMysecretsig1875!?

Resulting Digest (SHA-1)

F4CC376CD7A834D997B91598FA747825A238BE0A

If the SHASIGN sent in the hidden HTML fields of the transaction doesn't match the SHASIGN constructed at our end with the details of the order and the additional string (password/passphrase) entered in the SHA-IN passphrase field in the "Data and origin verification" tab, in the "Checks for e-Commerce" section of the Technical information page, you will receive the error message *"unknown order/1/s".*

If nothing is sent in the "SHASIGN" field in the hidden HTML fields, even though an additional string (password/passphrase) has been entered in the SHA-IN passphrase field in the "Data and origin verification" tab, "Checks for e-Commerce" section of the Technical information page – indicating you want to use an SHA signature with each transaction – you will receive the error message *"unknown order/0/s".*

Following is the hidden field used to transmit the SHA signature to our system:

Field	Usage
SHASIGN	Unique character string for order data validation. A string hashed with the SHA-1 algorithm will always be 40 characters long.

11.2 SHA-OUT signature

This string is constructed by concatenating the values of the fields sent with the order (sorted alphabetically, in the format 'PARAMETER=value'), followed by a passphrase. The passphrase is defined in the merchant's *Technical information*, in the "Transaction feedback" tab, in the "All transaction Submission modes" section. For the full list of parameters to include in the SHA Digest, please refer to Appendix: SHA Parameters. Please note that these values are all case sensitive.

IMPORTANT

- All sent parameters (that appear in the list in Appendix: List of Parameters to be included in SHA Calculations), will be included in the string to hash.
- All parameters need to be sorted alphabetically
- Parameters that do not have a value should NOT be included in the string to hash
- Even though some parameters are (partially) returned in lower case by our system, for the SHA-OUT calculation each parameter must be put in upper case.
- When you choose to transfer your test account to production via the link in the back-office menu, a random SHA-OUT passphrase will be automatically configured in your production account.
- For extra safety, we request that you use different SHA passphrases for TEST and PROD. Please note that if they are found to be identical, your TEST passphrase will be changed by our system (you will of course be notified).

In the same way we recreate the Digest to validate the transaction input with the SHA-IN, you have to reconstruct the hash, this time using your SHA-OUT passphrase and the parameters received from our system.

If the outcome is not identical, the request's parameters might have been tampered with. This check guarantees the accuracy and integrity of the parameter values sent in the request.

Example of a basic SHA-1-OUT calculation

Parameters (in alphabetical order, as returned by PostFinance):

ACCEPTANCE: 1234
amount: 15
BRAND: VISA
CARDNO: XXXXXXXXXXXX1111
currency: EUR
NCERROR: 0
orderID: 12

PAYID: 32100123
PM: CreditCard
STATUS: 9

SHA-OUT passphrase (in Technical info):

Mysecretsig1875!?

String to hash (with all parameters in uppercase:

ACCEPTANCE=1234Mysecretsig1875!?AMOUNT=15Mysecretsig1875!?
BRAND=VISAMysecretsig1875!?CARDNO=XXXXXXXXXXXX1111Mysecretsig1875!?
CURRENCY=EURMysecretsig1875!?NCERROR=0Mysecretsig1875!?
ORDERID=12Mysecretsig1875!?PAYID=32100123Mysecretsig1875!?
PM=CreditCardMysecretsig1875!?STATUS=9Mysecretsig1875!?

Resulting Digest (SHA-1):

209113288F93A9AB8E474EA78D899AFDBB874355

11.3 SHA-1 module

To be able to hash a string and send it to us, you must first install an Encryption module on your server.

SHA-1, SHA-256 and SHA-512 modules can be found on the internet, so you will not have any problem in finding a suitable one for your server. To help you find a module for your environment, we have compiled the following list of sites:

General info on SHA at W3.org:

http://www.w3.org/PICS/DSig/SHA1_1_0.html

.NET/SHA1:

http://msdn2.microsoft.com/en-us/library/system.security.cryptography.sha1managed.aspx

PHP/SHA1:

http://www.php.net/manual/en/ref.mhash.php

12 Appendix: UTF-8

By default, PostFinance uses ISO character encoding. However, our system supports the usage of UTF-8, if the merchant calls the appropriate pages.

For e-Commerce, the payment page would be https://e-payment.postfinance.ch/ncol/test/orderstandard_utf8.asp

IMPORTANT

- Our system cannot dynamically detect what character set the merchant is using. It is therefore the merchant's responsibility to call the appropriate page.
- If the merchant calls the UTF-8 payment page, all encoding for SHA will be done from an UTF-8 encoded string, for SHA-IN and for SHA-OUT. You can test your SHA integration with UTF-8 by calling the page https://e-payment.postfinance.ch/ncol/test/testsha_utf8.asp
- If the merchant is using dynamic templates, please ensure you declare the UTF-8 charset in the html header.

Please note that the usage of UTF-8 is mandatory for the following languages:

- Arabic
- Greek
- Hebrew
- Japanese
- Korean
- Russian
- Turkish

13 Appendix: Troubleshooting

The following section contains a non-exhaustive list of possible errors:

unknown order/1/r

This error means that the referrer we detected is not a URL the merchant has entered in the URL field in the “Data and origin verification” tab, “Checks for e-Commerce” section of his Technical Information page. The merchant is sending us the form with the hidden fields containing the order information from a different page from the one(s) entered in the URL field in the “Data and origin verification” tab, “Checks for e-Commerce” section.

unknown order/0/r

This error means that our server has not detected a referrer in the request we received. The merchant is sending us order details, but we do not know where they originated from. Please ensure that no methods are being used that block the referrer information (payment page in pop up, special web server configuration, customer’s browser configuration, etc.). If the customer’s browser does not send the referrer information, we can bypass the referrer check if a SHASIGN is present and correct (see SHA-IN signature).

unknown order/1/s

You will receive this error message if the SHASIGN sent in the hidden HTML fields for the transaction does not match the SHASIGN calculated at our end, using the details of the order and the additional string (password/passphrase) entered in the SHA-IN Signature field in the “Data and origin verification” tab, “Checks for e-Commerce” section of the Technical Information page.

unknown order/0/s

You will receive this error message if the "SHASIGN" field in the hidden HTML fields is empty but an additional string (password/passphrase) has been entered in the SHA-IN Signature field in the “Data and origin verification” tab, “Checks for e-Commerce” section of the Technical Information page, indicating you want to use a SHA signature with each transaction.

PSPID not found or not active

This error means that the value you have entered in the PSPID field does not exist in the respective environment (test or production) or the account has not yet been activated.

no <parameter> (for instance: no PSPID)

This error means that the value you sent for the obligatory <parameter> field is empty.

<parameter> too long (for instance: currency too long)

This error means that the value in your <parameter> field exceeds the maximum length.

amount too long or not numeric: ... OR Amount not a number

This error means that the amount you sent in the hidden fields either exceeds the maximum length, or contains invalid characters such as ‘.’ or ‘,’.

not a valid currency : ...

This error means that you have sent a transaction with a currency code that is incorrect or does not exist.

The currency is not accepted by the merchant

This error means that you have sent a transaction in a currency that has not been registered in your account details.

ERROR, PAYMENT METHOD NOT FOUND FOR: ...

This error means that the PM value you sent in your hidden fields does not match any of the payment methods you have selected in your account, or that the payment method has not been activated in your payment methods page.

14 Appendix: Short Status Overview

The following section contains a non-exhaustive list of statuses; for a full list please refer to: https://e-payment.postfinance.ch/ncol/paymentinfos1.asp.

Status	NCERROR	NCSTATUS	Explanation
5 Authorised	0	0	The authorisation has been accepted. An authorisation code is available in the “ACCEPTANCE” field. The status will be 5 if you have defined “Authorisation” as the default operation code in the "Global transaction parameters" tab, in the "Default operation code" section of the Technical information page in your account.
9 Payment requested	0	0	The payment has been accepted. An authorisation code is available in the field “ACCEPTANCE”. The initial status of a transaction will be 9 if you have defined “Sale” as the default operation code in the "Global transaction parameters" tab, "Default operation code" section of the Technical information page in your account.
0 Invalid or incomplete	500....	5	At least one of the payment data fields is invalid or missing. The NCERROR and NCERRORPLUS fields give an explanation of the error (list available at https://e-payment.postfinance.ch/ncol/paymentinfos1.asp).
2 Authorization refused	300....	3	The authorisation has been refused by the financial institution. The customer can retry the authorisation process after selecting another card or another payment method.
51 Authorisation waiting	0	0	The authorisation will be processed offline. This is the standard response if the merchant has chosen offline processing in his account configuration. The status will be 51 in two cases: • You have defined “Always offline (Scheduled)” as payment processing in the "Global transaction parameters" tab, "Processing for individual transactions" section of the Technical Information page in your account. • When the online acquiring system is unavailable and you have defined “Online but switch to offline in intervals when the online acquiring system is unavailable” as payment processing in the "Global transaction parameters" tab, "Processing for individual transactions" section of the Technical Information page in your account.

Status	NCERROR	NCSTATUS	Explanation
91 Payment processing	0	0	The data capture will be processed offline.
52 Authorisation not known Or 92 Payment uncertain	200...	2	A technical problem arose during the authorisation/ payment process, giving an unpredictable result. The merchant can contact the acquirer helpdesk to know the exact status of the payment or can wait until we have updated the status in our system. The customer should not retry the authorisation process since the authorisation/payment might already have been accepted.
93 Payment refused	300....	3	A technical problem arose.

15 Appendix: e-Commerce via e-mail

You can send your customers a payment request by e-mail, redirecting the customer to our secure payment page via a button or link in the e-mail.

If the e-mail is in HTML format you can use a form with hidden HTML fields to send us the necessary parameters in POST format.

If the e-mail is in plain text format you can append the necessary parameters to the URL in GET format. (e.g. https://e-payment.postfinance.ch/ncol/test/orderstandard.asp?PSPID=TESTSTD&OrderID=order123&amount=12500&currency=EUR&SHASIGN=8DDF4795640EB9FE9B367315C48E47338129A4F5& ...)

Please refer to Link between the Merchant's Website and our Payment Page for more information.

IMPORTANT

For e-Commerce via e-mail to work, you must bear in mind the following verification related points before the payment:

- You must leave the referrer/URL field in the URL field in the "Data and origin verification" tab, "Checks for e-Commerce" section of the Technical information page in your account empty in order to avoid "unknown order/1/r" errors.
- You must use an SHA signature as the data verification method for the order details. For further details about the SHA-IN, please refer to Appendix: SHA.

16 Appendix: List of Parameters to be included in SHA Calculations

16.1 SHA-IN

ACCEPTANCE
ACCEPTURL
ADDMATCH
ADDRMATCH
AIACTIONNUMBER
AIAGIATA
AIAIRNAME
AIAIRTAX
AIBOOKIND*XX*
AICARRIER*XX*
AICHDET
AICLASS*XX*
AICONJTI
AIDEPTCODE
AIDESTCITY*XX*
AIDESTCITYL*XX*
AIEXTRAPASNAME*XX*
AIEYCD
AIFLDATE*XX*
AIFLNUM*XX*
AIGLNUM
AIINVOICE
AIIRST
AIORCITY*XX*
AIORCITYL*XX*
AIPASNAME
AIPROJNUM
AISTOPOV*XX*
AITIDATE
AITINUM
AITINUML*XX*
AITYPCH
AIVATAMNT
AIVATAPPL
ALIAS
ALIASOPERATION
ALIASUSAGE
ALLOWCORRECTION
AMOUNT
AMOUNT*XX*
AMOUNTHTVA

AMOUNTTVA
BACKURL
BATCHID
BGCOLOR
BLVERNUM
BIN
BRAND
BRANDVISUAL
BUTTONBGCOLOR
BUTTONTXTCOLOR
CANCELURL
CARDNO
CATALOGURL
CAVV_3D
CAVVALGORITHM_3D
CERTID
CHECK_AAV
CIVILITY
CN
COM
COMPLUS
CONVCCY
COSTCENTER
COSTCODE
CREDITCODE
CUID
CURRENCY
CVC
CVCFLAG
DATA
DATATYPE
DATEIN
DATEOUT
DCC_COMMPERC
DCC_CONVAMOUNT
DCC_CONVCCY
DCC_EXCHRATE
DCC_EXCHRATETS
DCC_INDICATOR
DCC_MARGINPERC
DCC_REF
DCC_SOURCE
DCC_VALID
DECLINEURL
DEVICE
DISCOUNTRATE
DISPLAYMODE
ECI

ECI_3D
ECOM_BILLTO_POSTAL_CITY
ECOM_BILLTO_POSTAL_COUNTRYCODE
ECOM_BILLTO_POSTAL_COUNTY

ECOM_BILLTO_POSTAL_NAME_FIRST
ECOM_BILLTO_POSTAL_NAME_LAST
ECOM_BILLTO_POSTAL_POSTALCODE
ECOM_BILLTO_POSTAL_STREET_LINE1
ECOM_BILLTO_POSTAL_STREET_LINE2
ECOM_BILLTO_POSTAL_STREET_NUMBER
ECOM_CONSUMERID
ECOM_CONSUMER_GENDER
ECOM_CONSUMEROGID
ECOM_CONSUMERORDERID
ECOM_CONSUMERUSERALIAS
ECOM_CONSUMERUSERPWD
ECOM_CONSUMERUSERID
ECOM_ESTIMATEDELIVERYDATE

ECOM_PAYMENT_CARD_EXPDATE_MONTH
ECOM_PAYMENT_CARD_EXPDATE_YEAR
ECOM_PAYMENT_CARD_NAME
ECOM_PAYMENT_CARD_VERIFICATION
ECOM_SHIPMETHODDETAILS

ECOM_SHIPMETHODSPEED

ECOM_SHIPMETHODTYPE

ECOM_SHIPTO_COMPANY
ECOM_SHIPTO_DOB
ECOM_SHIPTO_ONLINE_EMAIL
ECOM_SHIPTO_POSTAL_CITY
ECOM_SHIPTO_POSTAL_COUNTRYCODE
ECOM_SHIPTO_POSTAL_COUNTY

ECOM_SHIPTO_POSTAL_NAME_FIRST
ECOM_SHIPTO_POSTAL_NAME_LAST
ECOM_SHIPTO_POSTAL_NAME_PREFIX
ECOM_SHIPTO_POSTAL_POSTALCODE
ECOM_SHIPTO_POSTAL_STREET_LINE1
ECOM_SHIPTO_POSTAL_STREET_LINE2
ECOM_SHIPTO_POSTAL_STREET_NUMBER
ECOM_SHIPTO_TELECOM_FAX_NUMBER
ECOM_SHIPTO_TELECOM_PHONE_NUMBER
ECOM_SHIPTO_TVA
ED
EMAIL
EXCEPTIONURL
EXCLPMLIST

EXECUTIONDATE*XX*
FACEXCL*XX*
FACTOTAL*XX*
FIRSTCALL
FLAG3D
FONTTYPE
FORCECODE1
FORCECODE2
FORCECODEHASH
FORCEPROCESS
FORCETP
GENERIC_BL
GIROPAY_ACCOUNT_NUMBER
GIROPAY_BLZ
GIROPAY_OWNER_NAME
GLOBORDERID
GUID
HDFONTTYPE
HDTBLBGCOLOR
HDTBLTXTCOLOR
HEIGHTFRAME
HOMEURL
HTTP_ACCEPT
HTTP_USER_AGENT
INCLUDE_BIN
INCLUDE_COUNTRIES
INVDATE
INVDISCOUNT
INVLEVEL
INVORDERID
ISSUERID
IST_MOBILE
ITEM_COUNT
ITEMATTRIBUTES*XX*
ITEMCATEGORY*XX*
ITEMCOMMENTS*XX*
ITEMDESC*XX*
ITEMDISCOUNT*XX*
ITEMFDMPRODUCTCATEG*XX*
ITEMID*XX*
ITEMNAME*XX*
ITEMPRICE*XX*
ITEMQUANT*XX*
ITEMQUANTORIG*XX*
ITEMUNITOFMEASURE*XX*
ITEMVAT*XX*
ITEMVATCODE*XX*
ITEMWEIGHT*XX*

LANGUAGE
LEVEL1AUTHCPC
LIDEXCL*XX*
LIMITCLIENTSCRIPTUSAGE
LINE_REF
LINE_REF1
LINE_REF2
LINE_REF3
LINE_REF4
LINE_REF5
LINE_REF6
LIST_BIN
LIST_COUNTRIES
LOGO
MAXITEMQUANT*XX*
MERCHANTID
MODE
MTIME
MVER
NETAMOUNT
OPERATION
ORDERID
ORDERSHIPCOST
ORDERSHIPMETH
ORDERSHIPTAX
ORDERSHIPTAXCODE
ORIG
OR_INVORDERID
OR_ORDERID
OWNERADDRESS
OWNERADDRESS2
OWNERCTY
OWNERTELNO
OWNERTELNO2
OWNERTOWN
OWNERZIP
PAIDAMOUNT
PARAMPLUS
PARAMVAR
PAYID
PAYMETHOD
PM
PMLIST
PMLISTPMLISTTYPE
PMLISTTYPE
PMLISTTYPEPMLIST
PMTYPE
POPUP

POST
PSPID
PSWD
REF
REFER
REFID
REFKIND
REF_CUSTOMERID
REF_CUSTOMERREF
REGISTRED
REMOTE_ADDR
REQGENFIELDS
RNPOFFERT
RTIMEOUT
RTIMEOUTREQUESTEDTIMEOUT
SCORINGCLIENT
SETT_BATCH
SID
STATUS_3D
SUBSCRIPTION_ID
SUB_AM
SUB_AMOUNT
SUB_COM
SUB_COMMENT
SUB_CUR
SUB_ENDDATE
SUB_ORDERID
SUB_PERIOD_MOMENT
SUB_PERIOD_MOMENT_M
SUB_PERIOD_MOMENT_WW
SUB_PERIOD_NUMBER
SUB_PERIOD_NUMBER_D
SUB_PERIOD_NUMBER_M
SUB_PERIOD_NUMBER_WW
SUB_PERIOD_UNIT
SUB_STARTDATE
SUB_STATUS
TAAL
TAXINCLUDED*XX*
TBLBGCOLOR
TBLTXTCOLOR
TID
TITLE
TOTALAMOUNT
TP
TRACK2
TXTBADDR2
TXTCOLOR

TXTOKEN
TXTOKENTXTOKENPAYPAL
TYPE_COUNTRY
UCAF_AUTHENTICATION_DATA
UCAF_PAYMENT_CARD_CVC2
UCAF_PAYMENT_CARD_EXPDATE_MONTH
UCAF_PAYMENT_CARD_EXPDATE_YEAR
UCAF_PAYMENT_CARD_NUMBER
USERID
USERTYPE
VERSION
WBTU_MSISDN
WBTU_ORDERID
WEIGHTUNIT
WIN3DS
WITHROOT

16.2 SHA-OUT

AAVADDRESS
AAVCHECK
AAVZIP
ACCEPTANCE
ALIAS
AMOUNT
BIN
BRAND
CARDNO
CCCTY
CN
COMPLUS
CREATION_STATUS
CURRENCY
CVCCHECK
DCC_COMMPERCENTAGE
DCC_CONVAMOUNT
DCC_CONVCCY
DCC_EXCHRATE
DCC_EXCHRATESOURCE
DCC_EXCHRATETS
DCC_INDICATOR
DCC_MARGINPERCENTAGE
DCC_VALIDHOURS
DIGESTCARDNO
ECI
ED
ENCCARDNO
FXAMOUNT
FXCURRENCY

IP
IPCTY
NBREMAILUSAGE
NBRIPUSAGE
NBRIPUSAGE_ALLTX
NBRUSAGE
NCERROR
NCERRORCARDNO
NCERRORCN
NCERRORCVC
NCERRORED
ORDERID
PAYID
PM
SCO_CATEGORY
SCORING
STATUS
SUBBRAND
SUBSCRIPTION_ID
TRXDATE
VC