eCommerce Interface Reference - Hosted Pages

Document Change History

Version	Date	Author	Position	Comment
5.0.18	22.06.2015	Sankararao Ravada	Software Developer	Added s-t-1-100_referrer-url and s-t-1-30_forwarded-remote-address for Direct feedback failure cond
5.0.17	10.06.2015	Henri Huhtamäki	Quality Assurance Manager	Updated information for return values for invoice payments.
5.0.16	03.06.2015	Evgeni Kappinen	Software Developer	Update collector invoice notes
5.0.15	24.04.2015	Claudiu Chioariu	Software Developer	Added s-t-1-1024_dynamic-feedback parameter for merchant to request extra parameters to be sent payment process response.
5.0.14	24.04.2015	Sangeetha Jaganathan	Software Developer	Added i-t-4-4_card-minimum-validity parameter for merchant to check the card's minimum validity wit expiration.
5.0.13	25.02.2015	Aseefulla Kamtidarshaik	Software Developer	Added s-t-1-30_bill-to-address-first-name, s-t-1-30_bill-to-address-last-name, s-t-1-100_bill-to-address-email, s-t-1-30_bill-to-address-phone-number, s-t-1-30_bill-to-address-line-c s-t-1-30_bill-to-address-line-two, s-t-1-30_bill-to-address-line-three, s-t-1-30_bill-to-address-postal-co s-t-1-30_bill-to-address-city, s-t-1-30_bill-to-address-state, i-t-1-3_bill-to-address-country-code param for Customer Bill To.
5.0.12	25.02.2015	Sangeetha Jaganathan	Software Developer	Added Ship To parameters s-t-1-30-delivery-address-first-name, s-t-1-30-delivery-address-last-name 30-delivery-address-state, s-t-1-30-delivery-address-phone-number, s-t-1-100-delivery-address-ema
5.0.11	20.02.2015	Adrian Pascut	Java Architect HCL	Added parameter s-t-3-4_http-method-type parameter for merchant to specify if the used HTTP meth type, to return the success notification of the payment, is GET or POST.
5.0.10	18.02.2015	Yinxia Zhao	Software Developer	Add section Mandatory Transaction Information, updated the Description for "i-t-1-1_save-payment-m parameter under "Payment Initialization Form Parameters" section
5.0.9	17.02.2015	Sandip Haldar	Software Developer	Added i-t-1-1_skip-three-d-secure parameter for Selective 3DSecure
5.0.8	13.02.2015	Romain Rouge	Software Developer	Added payment session timeout parameter (i-t-1-9_payment-session-minutes-timeout)
5.0.7	10.02.2015	Kristaps Kohs	Software Developer	Added token scope parameter
5.0.6	28.01.2015	Kristaps Kohs	Software Developer	Added Token extra info parameter
5.0.5	25.9.2014	Lassi Lehtinen	Project Manager	Fixed table of contents and other minor edits.
5.0.4	19.8.2014	Evgeni Kappinen	Software Develolper	Updated payment method list.
5.0.3	15.8.2014	Björn Delin	Software Develolper	Added s-t-1-32_type-of-payment parameter.
5.0.2	6.6.2014	Cristina Aldea	Software Developer	Added s-t-1-36_service-code optional parameter.
5.0.1	12.5.2014	Evgeni Kappinen	Software Developer	Added payment methods svea-webpay-installment and svea-webpay-invoice.
5.0.0	17.3.2014	Björn Delin	Software Developer	Added s-t-5-256_change-server-to-server-success-url parameter.
4.0.2	17.3.2014	Evgeni Kappinen	Software Developer	Added parameters s-f-5-256_success-url, s-f-5-256_rejected-url, s-f-5-256_cancel-url, s-f-5-256_expired-url, s-f-5-256_e
4.0.1	21.2.2014	Sampo Korhonen	Software Developer	Added s-f-1-20_reference-number parameter to Payment Success Post.

4.0.0	20.2.2014	Evgeni Kappinen	Software Developer	Added s-t-1-6_card-expected-validity parameter.
3.0.2.31	27.1.2014	Tiina Virta	Technical Documentation	Added contact info for Norway.
3.0.2.30	3.12.2013	Tiina Virta	Technical Documentation	Added appendix to the end and did minor cleaning up.
3.0.2.29	6.11.2013	Kristaps Kohs	Software Developer	Added new save payment option.
3.0.2.28	21.10.2013	Markku Hyppönen	Support Coordinator	Contact information part edited. Added subtitle 'Finland'. Information for all markets will be added soo
3.0.2.27	18.10.2013	Joonas Kekoni	Software Developer	Clarified shopping basket item documentation somewhat.
3.0.2.26	15.10.2013	Cristina Aldea	Software Developer	Added new cancel reject message cancel-bank_axess_error.
3.0.2.25	12.9.2013	Evgeni Kappinen	Developer	Channel-mode interface update.
3.0.2.24	12.9.2013	Lassi Lehtinen	Project Manager	Updated production and customer test environment URLs.
3.0.2.23	3.9.2013	Joonas Kekoni	Software Developer	Added bi-unit-gross-cost-X parameter support.
3.0.2.22	27.6.2013	Markku Hyppönen	Scrum Master	Parameter post l-t-1-20_saved-payment-method-id removed from payment success result
3.0.2.21	18.6.2013	Cristina Aldea	Software Developer	Fixed return/accepted values enumeration parameters (mismatch with Java code)
3.0.2.20	13.6.2013	Kristaps Kohs	Software Developer	Added missing payment method codes.
3.0.2.19	4.6.2013	Markku Hyppönen	Scrum Master	Added supported locales.
3.0.2.18	3.6.2013	Evgeni Kappinen	Software Developer	Payment interface changes
3.0.2.17	8.5.2013	Tommi Laukkanen	Head of Research and Development	Updated checks to be done on payment response and production URLs.
3.0.2.16	8.5.2013	Joonas Kekoni	Software Developer	Updated "Payment Cancellation Scenarios"
3.0.2.15	22.3.2013	Risto Virtanen	Software Developer	Added notification about creation of recurring subscription and recurring payment.
3.0.2.14	20.3.2013	Risto Virtanen	Software Developer	Removed token-included parameter.
3.0.2.13	28.2.2013	Tommi Laukkanen	Head of Research and Development	Clarified collation when ordering parameters for signature content. Updated production URLs.
3.0.2.12	15.2.2013	Risto Virtanen	Software Developer	Added tokenization parameters.
3.0.2.11	1.2.2013	Risto Virtanen	Software Developer	Added optional parameter s-t-1-26_filing-code to Payment Success Result Form Parameters.
3.0.2.10	31.1.2013	Joonas Kekoni	Developer	Added the password 'password' of demo merchant agreement.
3.0.2.9	23.1.2013	Joonas Kekoni	Developer	Documented anonymous payment. Changed save payment only.
3.0.2.8	9.1.2013	Lassi Lehtinen	Project Manager	Fixed production environment URLs.
3.0.2.7	9.1.2013	Joonas Kekoni	Developer	Save Payment Method definition updated. Skip confirmation updated.
3.0.2.6	15.12.2012	Markku Hyppönen	Scrum Master	Fixed wrong parameter definition.

3.0.2.5	31.10.2012	Henri Huhtamäki	Quality Assurance Manager	Added possible values for payment method code.
3.0.2.4	24.10.2012	Henri Huhtamäki	Quality Assurance Manager	Fixed a typo in one parameter name.
3.0.2.4	5.10.2012	Jarno Tammelin	Quality Assurance Engineer	Formatting changes for pdf export
3.0.2.3	25.9.2012	Tommi Laukkanen	Head of Research and Development	Added buyer external identifier parameter to payment initialization form. Added information about dela result post URL.
3.0.2.2	5.7.2012	Risto Virtanen	Scrum Master	Specified valid characters for order number.
3.0.2.1	15.6.2012	Henri Huhtamäki	Quality Assurance Manager	Modified instructions related to payment response handling.
3.0.2.0	13.6.2012	Henri Huhtamäki	Quality Assurance Manager	Added new functional columns, e.g. recurring payment -related, to the interface and added instructior related to payment response handling.
3.0.1.2	30.5.2012	Tommi Laukkanen	Head of Research and Development	Added document change history.
3.0.1.1	29.5.2012	Tommi Laukkanen	Head of Research and Development	Fixed incorrect reference of SHA-1 to SHA-256 in interface changes.
3.0.1.0	29.5.2012	Tommi Laukkanen	Head of Research and Development	Updated payment interface version 3.0.1 changes to document. See interface changes for details.
3.0.0.0	2.3.2012	Tommi Laukkanen	Head of Research and Development	Updated payment interface version 3.0.0 changes to document. See interface changes for details.
2.0.0.0	17.2.2012	Tommi Laukkanen	Head of Research and Development	Updated payment interface version 2.0.0 changes to document. See interface changes for details.
1.0.0.0	5.4.2011	Tommi Laukkanen	Head of Research and Development	Updated payment interface version 1.0.0 changes to document. See interface changes for details.

Table of Contents

Introduction

This document describes integration process and browser interface between a web shop (later a shop system) and Verifone E-Commerce System (later the payment system). The interface is designed to operate over HTTPS where primary communication channel between a shop system and the payment system is via web browser of an end customer (later buyer). Authentication of both systems and verification of message integrity is implemented using digital signatures.

Interface Change Log

Version 5.0.x

1. Added parameter s-t-5-256_change-server-to-server-success-url, which sets the delayed status url if the value has been changed.
2. Added optional parameter s-t-1-36_service-code used to save a token associated to a specific VAS code
3. Added parameter s-t-1-32_type-of-payment for limiting the type of payment if specified.
4. Added parameter i-t-1-9_payment-session-minutes-timeout for changing the default value if specified (and value between minimum and maximum).
5. Added parameter i-t-1-1_skip-three-d-secure parameter for merchant's request to skip 3DSecure
6. Added parameter s-t-3-4_http-method-type parameter for merchant to specify if the used HTTP method type, to return the success notification of the payment, is GET or POST.
7. Added parameters s-t-1-30-delivery-address-first-name, s-t-1-30-delivery-address-last-name, s-t-1-30-delivery-address-state, s-t-1-30-delivery-address-phone-number, s-t-1-30-delivery-address-email to get Ship To information
8. Added parameter s-t-1-1024_dynamic-feedback, which indicates the parameters to be added to the response if available.
9. Added parameter s-t-1-100_referrer-url and s-t-1-30_forwarded-remote-address for Direct feedback failure condition.

Version 4.0.x

1. Added parameter s-t-1-6_card-expected-validity, which is returned on card saving via payment interface. Also, during list of payment methods via server interface. Value represents card expiration date.
2. Added parameters, s-f-5-256_success-url, s-f-5-256_rejected-url, s-f-5-256_cancel-url, s-f-5-256_expired-url, s-f-5-256_error-url, extended lengths of the previous interface values.

Version 3.0.2

1. Added more instructions related to checking payment response columns.
2. New Payment Initialization Form parameter i-t-1-1_web-terminal-payment (nullable, backwards compatible)
3. New Payment Initialization Form parameter s-t-1-30_recurring-payment-subscription-name (nullable, backwards compatible)
4. New Payment Initialization Form parameter s-t-1-30_recurring-payment-subscription-code (nullable, backwards compatible)
5. New Payment Initialization Form parameter i-t-1-3_recurring-payment-subscription-expected-period (nullable, backwards compatible)
6. New Payment Initialization Form parameter t-t-14-19_recurring-payment-subscription-end (nullable, backwards compatible)
7. New Payment Success Result Form parameter l-t-1-20_saved-payment-method-id (nullable, backwards compatible)
8. New Payment Initialization Form parameter s-t-1-255_buyer-external-id (nullable, backwards compatible)
9. Documented anonymous payment.
10. Added "s-t-1-36_bi-merchant-agreement-code", String, 1 , 36, t => Merchant code of the of the merchant selling the product (nullable)
11. Added "s-t-1-36_bi-product-number", String , 1, 36, t => Textual product number assigned by shop system. Valid characters are a-z, A-Z,0-9 and minus sign. (nullable)
12. Added "i-t-1-4_bi-commission-percentage",Integer , 1, 4, t => Commission percentage. Integer formatted as string with 1-4 numeric characters (nullable)
13. Added "l-t-1-20_bi-fee-amount", Long, 1,20, t (conditional) => Commission fee, Long formatted as string with 1-20 numeric characters

Version 3.0.1

1. Payment token calculation algorithm switched from MD5 to SHA-256.

Version 3.0.0

1. Changed s-f-1-30_buyer-email-address to s-f-1-100_buyer-email-address
2. Changed signature string format as follows: If ';' occurs in value it will be replaced with ';;' in signature content string. This applies to both request and response.
3. Changed success form s-f-1-40_payment-method to s-f-1-30_payment-method-code
4. Added l-t-1-20_saved-payment-method-id to Payment Initiation Form
5. Added i-t-1-1_skip-confirmation-page to Payment Initiation Form
6. Changed s-f-1-15_transaction-number to l-f-1-20_transaction-number

Version 2.0.0

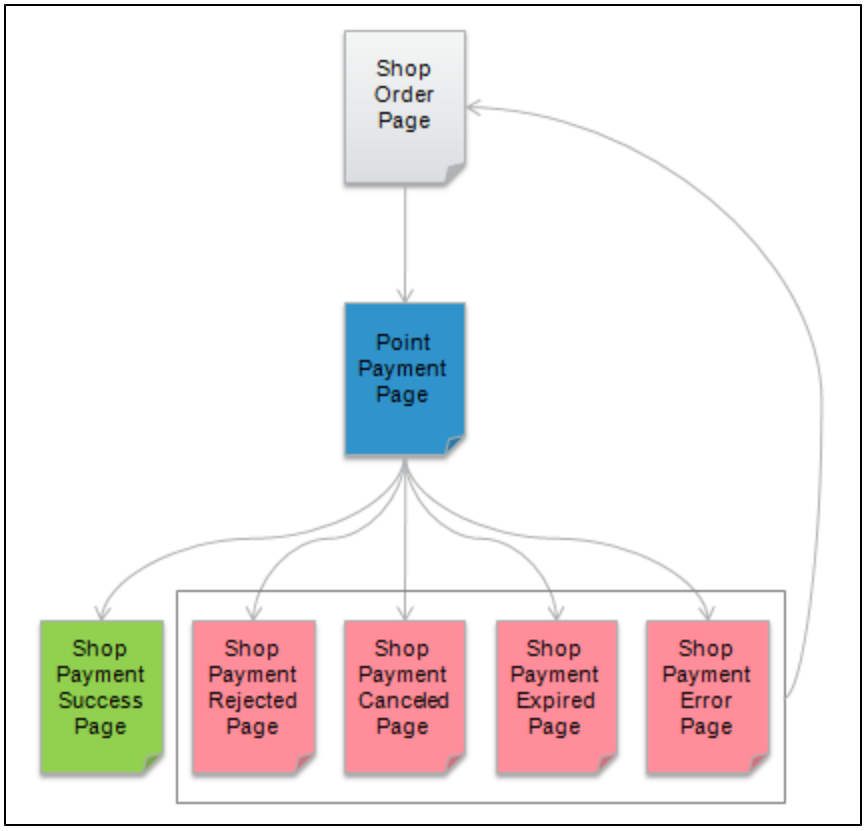
1. Added optional parameter s-t-1-30_payment-method-code.
2. Added optional parameter s-t-1-30_style-code.
3. Added optional parameter i-t-1-1_recurring-payment.
4. Added optional parameter i-t-1-1_deferred-payment.
5. Removed l-t-1-20_bi-discounted-amount-<N>.
6. Added l-f-1-20_order-gross-amount.
7. Modified l-f-1-20_order-net-amount description.
8. Added l-t-1-20_bi-gross-amount-<N>.
9. Modified l-t-1-20_bi-net-amount-<N>.

Interface Description

This document describes technically the payment interface to enable third party integrations of shop systems to the payment system.

Process

The payment process starts at Shop Order Page (later order page) where order is summarized and button for moving to Verifone Payment Page (later payment page) is present. Pushing the payment button posts the Verifone Payment Initialization Form (later initialization form) to the payment page. The payment process ends with posting of Verifone Payment Success Result Form (later success form) to the Shop Success Page (later success page) or posting of Payment Cancel Result Form (later cancel form) to one of the four cancel pages as illustrated below. It should to be possible for the user to move with a single click from the cancel page to the order page to retry payment. Alternatively, the order page can implement functionality in all the four cancel pages, in which case the order page should be able to process the cancel result form post and the order page URL should be given to all four cancel page URLs.



Payment Cancellation Scenarios

Payment process has four main cancel scenarios as listed below:

Name	Message	Description
Rejected	cancel-payment-rejected	Payment was rejected buy payment acquirer due to restrictions placed on payment method or lack of funds in the corresponding account.
Buyer Canceled	cancel-user-canceled	Buyer canceled to payment process.
Expired	cancel-payment-expired	The payment process expired due to timeout or usage of browser navigation buttons.
Error	cancel-system-error	The payment process failed due to error in the payment system or payment acquirer system.
Error	cancel-inv-payment-params	The payment process failed due to payment parameters from merchant, that lead to situation that could not be fulfilled, such as an attempt to make recurring bank payment. (recurring payments are supported by payment cards only). Failure to enter required parameters or their meet basic validity, such as lengths does **not** lead to this situation, but to a blank page.
Error	cancel-external-system-error	They payment failed due to external system giving invalid message authentication code.
Rejected	cancel-save-rej-not-enrolled	Attempt to save a non 3d secure enrolled card, when this is not supported by acquirer agreement for this type of card.
Buyer Canceled	cancel-paym-rej-not-enrolled	Attempt to pay with non 3d secure enrolled card more that the maximum set by acquirer agreement of the merchant for that card type. (Example: Customer is trying to buy 30€ payment with business visa, that does not support 3ds and the merchant has 20 € limit for non enrolled card in VISA acquirer agreement.)
Rejected	cancel-ext-address-mismatch	External system has different address than given one.
Buyer Canceled	cancel-too-many-sms-passwords	User tried to enter wrong sms password too many times.

Buyer Canceled	cancel-too-many-input-retries	Page has been reloaded for too many times. Browsers have been instructed not to reload payment web pages, so if this happens payment web assumed that the request is not from browser or browser is reloading page infinitely.
Rejected	cancel-bank_axess_error	Payment rejected because of a BankAxess error code returned. (Example: J1: Bank does not support BankAxess).

The message value is passed in cancel result posts (using parameter s-t-1-30_cancel-reason).

Transport

Transport between shop system and payment system is carried out via web browser of the buyer and secured using transport layer security (HTTPS) in both connections: browser to shop system and browser to payment system. Only server side certificate granted by public certificate authorities are used in transport layer security. Messages are encoded as HTML forms with UTF-8 character set as part of the page buyer views and transmitted with HTTP POST requests.

Security

Digital signatures are used to authenticate participating systems and to verify message integrity. Messages are signed with two different alternative algorithms to allow for wide variety of technical platforms to be supported. The public key size is 1024.

Calculating Digital Signature from Form Parameters

Form parameter name value pairs are sorted by key according the following collation: "0123456789-_abcdefghijklmnopqrstuvwxyz". The signed content is created from this value list according to the following format:

Format of the Signed Parameter Content

Note: If ';' occurs in value it will be replaced with ';;' in signature content string. This applies to both requests and responses.

```
<key1>=<value1>;<key2>=<value2>;...<keyN=valueN>;
```

Example of the Signed Parameter Content

```
i-f-1-3_order-currency-code=978;...;
```

Digital Signature Types

Current supported types are as follows:

Signature Number	Algorithm
1	RSA with SHA-1
2	RSA with SHA-512

There are two separate parameters in all POSTs for the above signature types.

Example POST with signature

```
i-f-1-11_interface-version=3&i-f-1-3_order-currency-code=978&i-t-1-11_bi-unit-count-0=
1
&i-t-1-1_deferred-payment=0&i-t-1-1_recurring-payment=0&i-t-1-1_save-payment-method=0
&i-t-1-1_skip-confirmation-page=0&i-t-1-3_delivery-address-country-code=246
&i-t-1-4_bi-discount-percentage-0=0&i-t-1-4_bi-vat-percentage-0=2300
&i-t-1-4_order-vat-percentage=2300&l-f-1-20_order-gross-amount=1230
&l-f-1-20_order-net-amount=1000&l-f-1-20_order-vat-amount=230
&l-t-1-20_bi-gross-amount-0=1230&l-t-1-20_bi-net-amount-0=1000
&l-t-1-20_bi-unit-cost-0=1000&l-t-1-20_saved-payment-method-id=
&locale-f-2-5_payment-locale=fi_FI
&s-f-1-100_buyer-email-address=matti.meikalainen%40point.fi
&s-f-1-10_software-version=1.0.1&s-f-1-30_buyer-first-name=John
&s-f-1-30_buyer-last-name=Smith&s-f-1-30_software=My+Web+Shop
&s-f-1-36_merchant-agreement-code=line-test-merchant-agreement-code
&s-f-1-36_order-number=1336741353584
&s-f-32-32_payment-token=4952A81A2BD143AA3FDDF6D8BB5EF432
&s-f-5-128_cancel-url=https%3A%2F%2Fdev-test-ecom%2Ftest-shop%2Fcancel
&s-f-5-128_error-url=https%3A%2F%2Fdev-test-ecom%2Ftest-shop%2Fcancel
&s-f-5-128_expired-url=https%3A%2F%2Fdev-test-ecom%2Ftest-shop%2Fcancel
&s-f-5-128_rejected-url=https%3A%2F%2Fdev-test-ecom%2Ftest-shop%2Fcancel
&s-f-5-128_success-url=https%3A%2F%2Fdev-test-ecom%2Ftest-shop%2Freceipt
&s-t-1-30_bi-name-0=test-basket-item-0
&s-t-1-30_buyer-phone-number=%2B358+40+163+9099
&s-t-1-30_delivery-address-city=City
&s-t-1-30_delivery-address-line-one=Street+Address+%231
&s-t-1-30_delivery-address-line-three=Street+Address+%233
&s-t-1-30_delivery-address-line-two=Street+Address+%232
&s-t-1-30_delivery-address-postal-code=00234&s-t-1-30_payment-method-code=&s-t-1-30_st
yle-code=
&s-t-1-36_order-note=x213
&s-t-256-256_signature-one=13AE7CC1B32F385A487354FDD83E9EDAEF122A730766EF38CC3A0E64F72
B0D40E16
E40C1072CD221F55A70E5594692C06B6A1BCAC0A48CE57E869D67585BFE206DADE823CD7FA03C3B6BD13B9
D42AEC83
86521890526EB476FE42F4591F52388775CE013120F4D2556CA0956C820241C03BAB5097CC336861182D5E
D72DA09DE
&t-f-14-19_order-timestamp=2012-05-11+13%3A02%3A33
&t-f-14-19_payment-timestamp=2012-05-21+13%3A04%3A26
```

Reliability

Selecting Working Payment Node

For each payment the shop system will execute availability check to the payment page of payment cluster nodes in round robin manner to select a working node to communicate with.

Ensuring Transmission of Payment Result

The payment interface has two different feedback channels to signal payment result. First channel is the consumer returning with browser to web shop thus making a result form post. Second channel is redundant programmatic posting of result form directly from the payment system to the shop system. This is done to guarantee sending of result form in case of premature closing of browser of the buyer. The redundant post is sent to static delayed result URL defined by merchant web shop.

Page URLs

Name	Description	Posted Form
Verifone E-Commerce Payment Node #1 Availability	The URL to payment node #1 availability check page.	
Verifone E-Commerce Payment Node #2 Availability	The URL to payment node #2 availability check page.	
Verifone E-Commerce Payment Node #3 Availability	The URL to payment node #3 availability check page.	
Verifone E-Commerce Payment Node #1 Payment Page	The URL to payment node #1 payment page.	Payment Initiation Form
Verifone E-Commerce Payment Node #2 Payment Page	The URL to payment node #2 payment page.	Payment Initiation Form
Verifone E-Commerce Payment Node #3 Payment Page	The URL to payment node #3 payment page.	Payment Initiation Form
Web Shop Payment Success Page	The URL to payment success page of the web shop.	Payment Success Result Form
Web Shop Payment Rejected Page	The URL to payment rejected page of the web shop.	Payment Cancel Result Form
Web Shop Payment Canceled Page	The URL to payment canceled page of the web shop.	Payment Cancel Result Form
Web Shop Payment Expired Page	The URL to payment expired page of the web shop.	Payment Cancel Result Form
Web Shop Payment Error Page	The URL to payment error page of the web shop.	Payment Cancel Result Form

Messages

Availability Get

HTTP GET directed to one of the payment page URLs will result HTTP 200 (OK) and empty response content if the node is available. Any HTTP error code or other content in the response or no response at all (timeout) indicates that the payment system node is not available.

Payment Initialization Post

Optional fields without values should to be omitted entirely from the HTTP POSTs.

Payment Initialization Form Parameters

Name	Format	Opt	Example Value	Title	Version	Description
s-f-32-32_payment-token	String with 32 characters.	No	FA12...FF	Payment Token	3	SHA-256 hash of combination of merchant agreement code, order number and payment timestamp: SHA-256 s-f-1-36_merchant- agreement-code + ';' + s-f-1-36 _order-number + ';' + t-f-14-19_ payment-timestamp) converted to upper case hexadecimal string and truncated to 32 character string.
locale-f-2-5_payment-locale	String with length of 2-5 characters.	No	fi_FI	Locale	3	The language locale used by buyer. Supported locales are: fi_FI, sv_SE, no_NO, dk_DK, sv_FI and en_GB. Nonsupported languages are redirected to en_GB.
t-f-14-19_payment-timestamp	yyyy-MM-dd HH:mm:ss	No	2012-04-21 21:50:01	Payment Timestamp	3	UTC timestamp defining the payment start time from web shop point of view. If payment is retried then payment timestamp have to differ from first payment for same order.
s-f-1-36_merchant-agreement-code	String with length of 1-36 characters.	No	023423423345	Merchant Agreement Code	3	Textual code of the merchant agreement.
s-f-1-36_order-number	String with length of 1-36 characters.	No	123	Order Number	3	Textual order number assigned by shop system. Valid characters are a-z, A-Z,0-9 and minus sign.
t-f-14-19_order-timestamp	yyyy-MM-dd HH:mm:ss	No	2010-01-01 01:01:32	Order Timestamp	3	UTC timestamp defining the orders time from web shop point of view.

s-t-1-36_order-note	String with length of 0 or 1-36 characters.	Yes	Example note.	Order Note	3	Custom parameter reserved for shop system to use.
i-f-1-3_order-currency-code	String with length of 1-3 numeric characters.	No	978	Currency Code	3	Numeric ISO 4217 currency code.
l-f-1-20_order-gross-amount	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	100	Gross Amount	3	Total amount including taxes and discount with two decimal precision. Example value corresponds to 1 EUR.
l-f-1-20_order-net-amount	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	100	Net Amount	3	Total amount with two decimal precision. Calculated by summing over basket item net amounts. Example value corresponds to 1 EUR.
l-f-1-20_order-vat-amount	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	100	VAT Amount	3	Value added tax amount with two decimal precision. Example value corresponds to 1 EUR.
i-t-1-4_order-vat-percentage	Integer formatted as string with 0,1-4 numeric characters	Yes	2250	VAT Percentage	3	Value added tax with two decimal precission. Example value corresponds to 22,5%. Can be empty if multiple VAT percentages are used in order.
s-f-1-30_buyer-first-name	String with length of 1-30 characters.	No	John	First Name	3	First name of the buyer.
s-f-1-30_buyer-last-name	String with length of 1-30 characters.	No	Smith	Last Name	3	Last name of the buyer.
s-t-1-30_buyer-phone-number	String with length of 0,1-30 characters.	Yes	+358 40 2342342	Phone Number	3	Phone number of the buyer.
s-f-1-100_buyer-email-address	String with length of 1-100 characters.	No	john.smith@gmail.com	Email Address	3	Email address of the buyer.
s-t-1-255_buyer-external-id	String with length of 1-255 characters.	Yes	213123123	Buyer External Identifier	3	Identifier of the buyer assigned by web shop. To be used only in such cases where a unique buyer identifier defined by web shop system is required.
s-t-1-30_delivery-address-line-one	String with length of 0,1-30 characters.	Yes	Street 31	Delivery Address Line #1	3	Line one of the delivery address.
s-t-1-30_delivery-address-line-two	String with length of 0,1-30 characters.	Yes	Apartment 2	Delivery Address Line #2	3	Line two of the delivery address.
s-t-1-30_delivery-address-line-three	String with length of 0,1-30 characters.	Yes	Room 3	Delivery Address Line #3	3	Line three of the delivery address.
s-t-1-30_delivery-address-city	String with length of 0,1-30 characters.	Yes	Helsinki	Delivery Address City	3	City of the delivery address.
s-t-1-30_delivery-address-postal-code	String with length of 0,1-30 characters.	Yes	00270	Delivery Address Postal Code	3	Postal code of the delivery address.
i-t-1-3_delivery-address-country-code	String with length of 0,1-3 characters.	Yes	246	Delivery Address Country Code	3	Numeric ISO 3166 country code of the delivery address.
s-t-1-30_payment-method-code	String with length of 1-30 characters.	Yes	visa	Payment Method Code	3	Code identifying the chosen payment method or empty string if payment method is not chosen. Value can be found in Appendix (please see the end of this document)

l-t-1-20_saved-payment-method-id	64 bit signed integer value formatted as a string with 1-20 numeric characters.	Yes	242	Payment Method ID	3	ID of the saved payment method.
s-t-1-30_style-code	String with length of 1-30 characters.	Yes	my-style	Style	3	Code identifying the style sheet used in payment page or empty string if default style sheet is used.
i-t-1-1_deferred-payment	Integer with value 0 or 1.	Yes	1	Deferred Payment	3	Integer defining that payment is deferred payment. 0) Not deferred payment. 1) Deferred payment.
i-t-1-1_web-terminal-payment	Integer with value 0 or 1	Yes	0	Web Terminal Payment	3	If set to 1 instructs the payment process to skip payer identification and make a MOTO transaction. 0) Normal payment. 1) Web terminal (MOTO) payment (e.g. order taken in by merchant help desk/phone sales).
i-t-1-1_recurring-payment	Integer with value 0 or 1.	Yes	1	Recurring Payment	3	Integer defining that payment is recurring payment. If set to 1 then parameters s-t-1-30_recurring-payment-subscription-name, s-t-1-30_recurring-payment-subscription-code and i-t-1-3_recurring-payment-subscription-expected-period are also mandatory. The post that provides the first details. The following recurring payments are initiated via Server Interface. 0) Not recurring payment. 1) Recurring subscription should be created When this is set to 1, only recurring subscription is created. If a recurring payment should be processed after subscription creation, it must be processed via Server Interface as Payment Interface creates only the subscription.
s-t-1-30_recurring-payment-subscription-name	String with length 1-30 characters.	Yes	Merchant Magazine Order	Subscription Name	3	Human-readable name of the subscription that the payer can identify.
s-t-1-30_recurring-payment-subscription-code	String with length 1-30 characters.	Yes	MMOSubs123	Subscription Code	3	Subscription code that should be unique in the merchant's system.
i-t-1-3_recurring-payment-subscription-expected-period	Integer with value of 7-999	Yes	7	Subscription Period	3	Number of days expected between recurring payments. Safeguards payer from being billed multiple times in short period. The limits are to be agreed with Verifone.
t-t-14-19_recurring-payment-subscription-end	yyyy-MM-dd HH:mm:ss	Yes	2012-06-13 14:38:11	Subscription End	3	Datetime when the subscription ends - no payments can be done after this. Can be left empty, which means that the recurring payment is valid and can be used until the payer's credit card expiry date. If payer's credit card expires, the payments will fail so submitting larger value than that has the same effect than leaving this empty.

i-t-1-1_save-payment-method	Integer with value 0 or 1 or 2 or 3.	Yes	1	Save Payment Method	3	0) **Normal payment**. If user chooses credit card, then s/he is given save payment yes/no radio button as part of card information page. In case of successful payment with radio button set as yes, the payment is saved into the system. 1) **Save payment method and pay**. Card information page will not contain "save payment" radio button. When payment is successful, the credit card is saved into the system If payment method is not given, only cards are offered to user. No texts are changed. NOTE: Payment Method Code can be supplied, but only credit card payments are accepted. 2) **Save payment only**. UI texts will be changed, so that user is communicated that her credit card will be saved, but it will not be charged. Pay buttons will contain "Save card" and so on. Payment details page and Shopping baskets are not shown. Card information page does not contain save payment radio button. The card will be authorized with the given sum, but the authorized funds will not be captured. The funds used in authorization will be reversed immediately to buyer. Card will be saved to the system. Field i-t-1-1_skip-confirmation-page is assumed to be "1" even if 0 (or empty) is given. In this case, a zero amount payment is accepted, (l-f-1-20_order-gross-amount = 0) 3) **Disable save payment UI.** Save payment options will be removed from UI. In this case credit card will not be saved in system. NOTE2: The payment sum needs to be filled, the funds are authorized and the payment sum will be shown in 3D secure, if 3d secure is used. It is suggested to use smallest possible amount (such as 0.01 €) for the charge, even the funds are returned immediately to the end user. NOTE3: UI features "Payment details button disable" and "shopping basket disable" are present on templates and templates predating this feature, will show those features. NOTE4: When saved to system Card is encrypted using Verifone Public Keys, key alias which is used is set in merchant agreement.
i-t-1-1_register-token	Integer with value 0 or 1	Yes	1	Register Token	3	When payment is successful, a token is registered for the card that the user has used. **If this is set to 1, parameter i-t-1-1_save-payment-method has to be 1 or 2**, otherwise the payment will fail.
i-t-1-1_token-extra-info	Integer with value 0 or 1	Yes	1	Request extra info on token	5	If token is successfully registered, masked pan and token expiration date will be returned in response.
i-t-1-1_token-scope	Integer with value 1,2,3	Yes	1	Token scope	5	Value to indicate which scope token should belong to. 1. Terminal group 2. Company 3. Company group
i-t-1-9_payment-session-minutes-timeout	Integer	Yes	8	Payment session timeout		Timeout value for the host payment page in minutes. (must be between the 'hpp-minimum-timeout' property value and 'hpp-maximum-timeout' one)
s-t-1-36_service-code	String of max 36 chars	Yes	service_code	Register Token	5	The parameter will be used only if i-t-1-1_register-token is 1. If filled, the token will be associated to a specific VAS code.
i-t-1-1_skip-confirmation-page	Integer with value 0 or 1.	Yes	1	Skip Confirmation	3	Integer defining if confirmation page after successful payment should be skipped. 0) Include confirmation page to payment process. 1) Skip confirmation page in payment process. If the page has payment progress indicator the confirmation step will not be shown, if it is set to be skipped. (This is present on templates and templates predating this will show confirmation step, even if it is set to be skipped.)
s-f-5-128_success-url	String with length of 5-128 characters.	No	https://e.com/success	Success URL	3	URL of the web shop payment success page.

s-f-5-128_rejected-url	String with length of 5-128 characters.	No	https://e.com/cancel	Rejected URL	3	URL of the web shop payment rejected page.
s-f-5-128_cancel-url	String with length of 5-128 characters.	No	https://e.com/cancel	Cancel URL	3	URL of the web shop payment buyer canceled page.
s-f-5-128_expired-url	String with length of 5-128 characters.	No	https://e.com/cancel	Expired URL	3	URL of the web shop payment expired page.
s-f-5-128_error-url	String with length of 5-128 characters.	No	https://e.com/cancel	Error URL	3	URL of the web shop payment error page.
s-f-5-256_success-url	String with length of 5-256 characters.	No	https://e.com/success	Success URL	4	URL of the web shop payment success page.
s-f-5-256_rejected-url	String with length of 5-256 characters.	No	https://e.com/cancel	Rejected URL	4	URL of the web shop payment rejected page.
s-f-5-256_cancel-url	String with length of 5-256 characters.	No	https://e.com/cancel	Cancel URL	4	URL of the web shop payment buyer canceled page.
s-f-5-256_expired-url	String with length of 5-256 characters.	No	https://e.com/cancel	Expired URL	4	URL of the web shop payment expired page.
s-f-5-256_error-url	String with length of 5-256 characters.	No	https://e.com/cancel	Error URL	4	URL of the web shop payment error page.
s-t-5-256_change-server-to-server-success-url	String with length of 5-256 characters	Yes	https://shop.com/response	Delayed success url	5	URL of the delayed success url for the webshop.
s-t-1-32_type-of-payment	String with length of 1-32	Yes	card-payment	Type of payment	5	Type of payment limit the type of payment to only show card-payment, electronic-payment or invoice-payment.
s-f-1-30_software	String with length of 1-30 characters.	No	My Shop Software	Software	3	Name of the web shop software.
s-f-1-10_software-version	String with length of 1-10 characters.	No	1.0.1	Software Version	3	Version of the web shop software.
i-f-1-11_interface-version	String with length of 1-11 numeric characters.	No	1	Interface Version	3	Version of the payment interface.
s-t-1-40_submit	String with length of 1-40 characters.	Yes	Submit	Submit Button	3	The submit button.
s-t-256-256_signature-one	String with length of 256 characters.	Yes	FA12...FF	Signature One	3	128 byte signature converted to upper case hexadecimal string.
s-t-256-256_signature-two	String with length of 256 characters.	Yes	FA12...FF	Signature Two	3	128 byte signature converted to upper case hexadecimal string.
i-t-1-1_skip-three-d-secure	Integer with value 0 or 1.	Yes	1	Skip 3DSecure	5	Integer defining whether 3DSecure to be skipped for this payment. 0) Do not skip 3DSecure. 1) Skip 3DSecure.
s-t-3-4_http-method-type	String with values GET or POST	No	POST	HTTP method type	5	Parameter for merchant to specify if the used HTTP method type to return the success notification of the payment is GET or POST.
s-t-1-30-delivery-address-first-name	String with length of 1-30 characters	Yes	John	First Name	5	First Name of the Ship To address
s-t-1-30-delivery-address-last-name	String with length of 1-30 characters	Yes	Smith	Last Name	5	Last Name of the Ship To address
s-t-1-30-delivery-address-state	String with length of 1-30 characters	Yes	Northern Savonia	State	5	State of the Ship To address

s-t-1-30-delivery-address-phone-number	String with length of 1-30 characters	Yes	+358 40 163 9099	Phone number	5	Phone number of the Ship To address
s-t-1-100-delivery-address-email	String with length of 1-100 characters	Yes	john.smith@gmail.com	Email	5	Email address of the Ship To address
s-t-1-1024_dynamic-feedback	String with length of 1-1024	Yes	s-t-1-6_authorization-number, s-t-1-256_token-one-way, s-t-1-30_card-type, i-t-1-2_card-3ds-auth-status, i-t-1-1_card-3ds-enrollment-status, s-t-1-1_3ds-charge-back, i-t-1-3_customer-ip-country, i-t-1-3_card-issued-country, i-t-2-2_card-pan-last2, i-t-6-6_card-pan-first6, l-f-1-20_dynamic-reference-number, s-t-1-256_token-two-way, s-t-6-6_settlement-datee	Dynamic feedback	5	List of parameters to be added to the response if available.
s-t-1-100_referrer-url	String with length of 1-100		https://10.227.96.93/test-shop/?iv=5	Dynamic feedback failure condirion	5	Referer URL of the system during failure events (transaction fails or timesout or any adhoc exit by customer) from where failure happens is captured from request parameters and added to response form parameter.
s-t-1-30_forwarded-remote-address	String with length of 1-30		172.25.178.160	Dynamic feedback failure condirion	5	IP Address of the system during failure events (transaction fails or timesout or any adhoc exit by customer) from where failure happens is captured from request parameters and added to response form parameter.

Payment Initialization Form Shopping Basket Extension Parameters

1-50 basket items (indexes 0-49) are supported and they viewed to user as reminder of what the order contains.

Even though these parameters are not mandatory as set, if they are filled, then they have to be filled for all items included in the delivery. Basket items have to be filled with index numbers starting from 0 and have no gaps it between them.

Shopping basket it mandatory for all Invoice payment methods.

If you have one parameter set for an item you must have all the other parameters set for that item as well, except only one of **Item Unit Cost** and **Item Unit Gross Cost** must be filled. Both must not be filled.

Example:
If you have item 3, you must fill all fields of item 3, except you have to fill in only **l-t-1-20_bi-unit-cost-3** OR **l-t-1-20_bi-unit-gross-cost-3**, but not both.

s-t-1-30_bi-name-<N>	String with length of 1-30 characters.	Yes	Red Apple	Item Name	Item name of the Nth basket item.
l-t-1-20_bi-unit-cost-<N>	64 bit signed integer value formatted as a string with 1-20 numeric characters. Must be filled if unit gross cost is not filled. **Must not be filled if it is.**	Yes	100	Item Unit Cost	Unit cost with two decimal precision but without discount and tax. Example value corresponds to 1 EUR. NOTE: usage of unit cost instead of unit gross cost can create rounding errors, when refunding individual items. If you for example have gross cost of 89.00 EUR, there is no corresponding gross cost with discount 0% and GST 24%. 71.77 EUR and 24% GST is 88.99 EUR, but 71.78 EUR lead to gross cost of 89.01 EUR. Thus if consumer buys 2 items with gross cost of 89.00 and returns only one he will be returned 88.99 EUR. (If he returns both then the entire row will be refunded and no problem exists.) The solution to this problem is either to to use unit gross cost, or calculate unit gross cost in the first place from unit costs, and not the other way around, because if one does it this way, there will be rounding errors, since EURO and currencies in general are finitely dividable.
l-t-1-20_bi-unit-gross-cost-<N>	64 bit signed integer value formatted as a string with 1-20 numeric characters. Must be filled if unit cost is not filled. **Must not be filled if it is.**	yes	124	Item Unit Gross Cost	Unit cost with two decimal precision,with discount and tax. Example value corresponds 1 EUR , 24% vat and 0% discount.
i-t-1-11_bi-unit-count-<N>	Integer value formatted as string with 1-11 numeric characters.	Yes	1	Item Unit Count	Number of units in the item.
l-t-1-20_bi-gross-amount-<N>	64 bit signed integer value formatted as a string with 1-20 numeric characters.	Yes	100	Item Gross Amount	Item gross amount including tax and discount with two decimal precision. Example value corresponds to 1 EUR.

l-t-1-20_bi-net-amount-<N>	64 bit signed integer value formatted as a string with 1-20 numeric characters.	Yes	100	Item Net Amount	Item net amount calculated from unit cost times unit count with two decimal precission. Example value corresponds to 1 EUR.
i-t-1-4_bi-vat-percentage-<N>	Integer formatted as string with 0,1-4 numeric characters	Yes	2250	Item VAT Percentage	Item value added tax percentage with two decimal precission. Example value corresponds to 22,5%. Can be empty if multiple VAT percentages are used in order. Currently cannot be an empty string nor missing.
i-t-1-4_bi-discount-percentage-<N>	Integer formatted as string with 0,1-4 numeric characters	Yes	550	Item Discount Percentage	Item discount percentage tax with two decimal precission. Example value corresponds to 5,5%. Currently, cannot be an empty string nor missing

Channel payments

On top of the basket item parameters, channel payments are enabled by filling below parameters. All of them must have values to enable channel payments or NULL to disable channel payments. If channel payment is used, merchant agreement needs to be set to allow this type of payment and sub-merchants need to exist.

Note: Channel payments feature is only for special cases and use of it must be agreed with Verifone in advance. These parameter must not be used otherwise.

s-t-1-36_bi-merchant-agreement-code-<N>	String with length of 1-36 characters.	Yes, (if all are set to NULL). Otherwise, No.	NULL	Item Merchant Code	Channel-mode merchant code. Contains child merchant number for report transactions
s-t-1-36_bi-product-number-<N>	String with length of 1-36 characters.	Yes, (if all are set to NULL). Otherwise, No.	NULL	Item Product Number	Channel-mode product number. Contains product number for particular merchant
i-t-1-4_bi-commission-percentage-<N>	Integer formatted as string with 0,1-4 numeric characters.	Yes, (if all are set to NULL). Otherwise, No.	NULL	Item Commission percentage	Channel-mode commission percentage.
l-t-1-20_bi-fee-amount-<N>	64 bit signed integer value formatted as a string with 1-20 numeric characters.	Yes, (if all are set to NULL). Otherwise, No.	NULL	Item channel fee	Channel-mode fee amount.

Anonymous payment

Any merchant wishing to use anonymous payment must communicate to Verifone before doing so. There is however no technical blocker in Verifone service, so any merchant is technically able to use it (as merchant is able to fill in bogus names.)

It is possible to issue anonymous payment by setting first name and last name to ?. Both have to be filled with ?. Email may be set to ?, but may also be given,in which case it is saved by the system. External id may not be given. Anonymous payments must not be recurring.

Mandatory Transaction Information

The merchant needs to provide the following minimum mandatory information :

Mandatory Transaction Information	Description
`l-f-1-20_order-gross-amount`	1. **IF** save-payment-method equals to 2, **THEN** the amount value could equal or be greater than 0 2. **IF** save-payment-method does not exist **OR** its value doesn't equal to 2, **THEN** the amount value could only be greater than 0
`l-f-1-20_order-net-amount`	mandatory
`l-f-1-20_order-vat-amount`	mandatory
`i-f-1-3_order-currency-code`	mandatory
`s-f-1-36_order-number`	mandatory

s-f-1-100_buyer-email-address	mandatory
s-f-1-30_buyer-first-name	mandatory
s-f-1-30_buyer-last-name	mandatory
t-f-14-19_order-timestamp	mandatory
s-f-1-36_merchant-agreement-code	mandatory

NOTE: a zero amount payment should be possible. This is particularly useful in case of tokenization of a card where the future amount is not yet known. This corresponds to checking that the card exists and the account works (account in good standing).

Initialization Form Example

```
<form id="integration-form" action="#" method="post">
<table>
<tbody><tr><td>i-f-1-11_interface-version</td><td><input type="text"
name="i-f-1-11_interface-version" value="2"></td></tr>
<tr><td>i-f-1-3_order-currency-code</td><td><input type="text"
name="i-f-1-3_order-currency-code" value="978"></td></tr>
<tr><td>i-t-1-11_bi-unit-count-0</td><td><input type="text"
name="i-t-1-11_bi-unit-count-0" value="1"></td></tr>
<tr><td>i-t-1-1_deferred-payment</td><td><input type="text"
name="i-t-1-1_deferred-payment" value="0"></td></tr>
<tr><td>i-t-1-1_recurring-payment</td><td><input type="text"
name="i-t-1-1_recurring-payment" value="0"></td></tr>
<tr><td>i-t-1-3_delivery-address-country-code</td><td><input type="text"
name="i-t-1-3_delivery-address-country-code" value="246"></td></tr>
<tr><td>i-t-1-4_bi-discount-percentage-0</td><td><input type="text"
name="i-t-1-4_bi-discount-percentage-0" value="0"></td></tr>
<tr><td>i-t-1-4_bi-vat-percentage-0</td><td><input type="text"
name="i-t-1-4_bi-vat-percentage-0" value="2300"></td></tr>
<tr><td>i-t-1-4_order-vat-percentage</td><td><input type="text"
name="i-t-1-4_order-vat-percentage" value="2300"></td></tr>
<tr><td>l-f-1-20_order-gross-amount</td><td><input type="text"
name="l-f-1-20_order-gross-amount" value="1230"></td></tr>
<tr><td>l-f-1-20_order-net-amount</td><td><input type="text"
name="l-f-1-20_order-net-amount" value="1000"></td></tr>
<tr><td>l-f-1-20_order-vat-amount</td><td><input type="text"
name="l-f-1-20_order-vat-amount" value="230"></td></tr>
<tr><td>l-t-1-20_bi-gross-amount-0</td><td><input type="text"
name="l-t-1-20_bi-gross-amount-0" value="100"></td></tr>
<tr><td>l-t-1-20_bi-net-amount-0</td><td><input type="text"
name="l-t-1-20_bi-net-amount-0" value="100"></td></tr>
<tr><td>l-t-1-20_bi-unit-cost-0</td><td><input type="text"
name="l-t-1-20_bi-unit-cost-0" value="100"></td></tr>
<tr><td>locale-f-2-5_payment-locale</td><td><input type="text"
name="locale-f-2-5_payment-locale" value="fi_FI"></td></tr>
<tr><td>s-f-1-10_software-version</td><td><input type="text"
name="s-f-1-10_software-version" value="1.0.1"></td></tr>
<tr><td>s-f-1-100_buyer-email-address</td><td><input type="text"
name="s-f-1-100_buyer-email-address" value="matti.meikalainen@point.fi"></td></tr>
<tr><td>s-f-1-30_buyer-first-name</td><td><input type="text"
name="s-f-1-30_buyer-first-name" value="John"></td></tr>
<tr><td>s-f-1-30_buyer-last-name</td><td><input type="text"
```

```
name="s-f-1-30_buyer-last-name" value="Smith"></td></tr>
<tr><td>s-f-1-30_software</td><td><input type="text" name="s-f-1-30_software"
value="My Web Shop"></td></tr>
<tr><td>s-f-1-36_merchant-agreement-code</td><td><input type="text"
name="s-f-1-36_merchant-agreement-code"
value="line-test-merchant-agreement-code"></td></tr>
<tr><td>s-f-1-36_order-number</td><td><input type="text" name="s-f-1-36_order-number"
value="1325141018121"></td></tr>
<tr><td>s-f-5-128_cancel-url</td><td><input type="text" name="s-f-5-128_cancel-url"
value="http://127.0.0.1:8081/test-shop/cancel"></td></tr>
<tr><td>s-f-5-128_error-url</td><td><input type="text" name="s-f-5-128_error-url"
value="http://127.0.0.1:8081/test-shop/cancel"></td></tr>
<tr><td>s-f-5-128_expired-url</td><td><input type="text" name="s-f-5-128_expired-url"
value="http://127.0.0.1:8081/test-shop/cancel"></td></tr>
<tr><td>s-f-5-128_rejected-url</td><td><input type="text"
name="s-f-5-128_rejected-url"
value="http://127.0.0.1:8081/test-shop/cancel"></td></tr>
<tr><td>s-f-5-128_success-url</td><td><input type="text" name="s-f-5-128_success-url"
value="http://127.0.0.1:8081/test-shop/receipt"></td></tr>
<tr><td>s-t-1-30_payment-method-code</td><td><input type="text"
name="s-t-1-30_payment-method-code" value=""></td></tr>
<tr><td>s-t-1-30_style-code</td><td><input type="text" name="s-t-1-30_style-code"
value=""></td></tr>
<tr><td>s-t-1-30_bi-name-0</td><td><input type="text" name="s-t-1-30_bi-name-0"
value="test-basket-item-0"></td></tr>
<tr><td>s-t-1-30_buyer-phone-number</td><td><input type="text"
name="s-t-1-30_buyer-phone-number" value="+358 40 163 9099"></td></tr>
<tr><td>s-t-1-30_delivery-address-city</td><td><input type="text"
name="s-t-1-30_delivery-address-city" value="City"></td></tr>
<tr><td>s-t-1-30_delivery-address-line-one</td><td><input type="text"
name="s-t-1-30_delivery-address-line-one" value="Street Address #1"></td></tr>
<tr><td>s-t-1-30_delivery-address-line-three</td><td><input type="text"
name="s-t-1-30_delivery-address-line-three" value="Street Address #3"></td></tr>
<tr><td>s-t-1-30_delivery-address-line-two</td><td><input type="text"
name="s-t-1-30_delivery-address-line-two" value="Street Address #2"></td></tr>
<tr><td>s-t-1-30_delivery-address-postal-code</td><td><input type="text"
name="s-t-1-30_delivery-address-postal-code" value="00234"></td></tr>
<tr><td>s-t-1-36_order-note</td><td><input type="text" name="s-t-1-36_order-note"
value="x213"></td></tr>
<tr><td>state</td><td><input type="text" name="state"
value="sign-and-forward"></td></tr>
<tr><td>t-f-14-19_order-timestamp</td><td><input type="text"
name="t-f-14-19_order-timestamp" value="2011-12-29 06:43:38"></td></tr>
<tr><td>t-f-14-19_payment-timestamp</td><td><input type="text"
name="t-f-14-19_payment-timestamp" value="2011-12-29 06:43:38"></td></tr>
```

```
</tbody></table>
</form>
```

Initialization Post Response

On success payment system will respond with HTTP status 200 OK. Any other response code indicates availability problem in the payment system node.

Payment Success Result Post

Payment Success Result Form Parameters

Name	Format	Example Value	Supported in version	Title	Description
l-f-1-20_transaction-number	64 bit signed integer value formatted as a string with 1-20 numeric characters.	123	3	Transaction Number	Transaction number identifying the payment transaction. Assigned by payment system.
s-f-1-30_payment-method-code	String with length of 1-30 characters.	visa	3	Payment Method	String key identifying the payment method used. Value can be found in Appendix (please see the end of this document)
s-f-1-36_order-number	String with length of 1-36 characters.	123	3	Order Number	Textual order number assigned by shop system. Valid characters are a-z, A-Z, 0-9 and minus sign.
s-t-1-36_order-note	String with length of 0 or 1-36 characters.	Example note.	3	Order Note	Custom parameter reserved for shop system to use.
t-f-14-19_order-timestamp	yyyy-MM-dd HH:mm:ss	2010-01-01 01:01:32	3	Order Timestamp	UTC timestamp defining the orders time from web shop point of view.
i-f-1-3_order-currency-code	String with length of 1-3 numeric characters.	978	3	Currency Code	Numeric ISO 3166 currency code.
l-f-1-20_order-gross-amount	64 bit signed integer value formatted as a string with 1-20 numeric characters.	100	3	Gross Amount	Gross amount including tax with two decimal
s-f-1-10_software-version	String with length of 1-10 characters.	1.0.1	3	Version	Version of the payment system.
i-f-1-11_interface-version	String with length of 1-11 numeric characters.	1	3	Version	Version of the payment interface.
s-f-1-20_reference-number	String with length of 1-20 characters.	1230000045678	4	Reference Number	Verifone Reference Number of electronic payment.
s-t-256-256_signature-one	String with length of 512 characters.	fa12...ff	3	Signature One	256 byte signature converted to lower case hexadecimal string. String length will be 512 characters but the parameter name includes 256 due to backwards compatibility issues.
s-t-256-256_signature-two	String with length of 512 characters.	fa12...ff	3	Signature Two	256 byte signature converted to lower case hexadecimal string. String length will be 512 characters but the parameter name includes 256 due to backwards compatibility issues.
s-t-1-256_token	String with length of 0 or 1-256 characters.	100	3	Token	Token that was registered for the card that the used.
s-t-1-26_filing-code	String with length of 0 or 1-26 characters.	1234567890	3	Filing Code	Filing code of the transaction. Returned for card payments.

s-t-0-11_social-security-number	String with length of 0 to 11 characters.	110101-0000	3	Person ID	Person ID of the payer in invoice payments. Returned only for invoices and only when available and agreed to be returned.
s-f-1-100_buyer-email-address	String with length of 1 to 100 characters.	someone@verifone.com	3	Email address	Email address of the payer in invoice payments. Returned only for invoices and only when available. Note that the value is not necessarily the same as in payment request.
s-t-1-30_buyer-phone-number	String with length of 1 to 30 characters.	+358123456789	3	Phone Number	Phone number of the payer in invoice payments. Returned only for invoices and only when available. Note that the value is not necessarily the same as in payment request.
s-t-1-30_delivery-address-city	String with length of 1 to 30 characters.	Vantaa	3	Delivery Address City	City of invoice payer's address. Returned only for invoices and only when available. Note that the value is not necessarily the same as in payment request.
s-t-1-30_delivery-address-line-one	String with length of 1 to 30 characters.	Vantaankoskentie 14 C	3	Delivery Address Line One	First line of invoice payer's address. Returned only for invoices and only when available. Note that the value is not necessarily the same as in payment request.
s-t-1-30_delivery-address-line-two	String with length of 1 to 30 characters.	C/O Verifone Inc.	3	Delivery Address Line Two	Second line of invoice payer's address. Returned only for invoices and only when available. Note that the value is not necessarily the same as in payment request.
s-t-1-30_delivery-address-postal-code	String with length of 1 to 30 characters.	001670	3	Delivery Address Postal Code	Postal code of invoice payer's address. Returned only for invoices and only when available. Note that the value is not necessarily the same as in payment request.
i-t-1-3_delivery-address-country-code	Number with length of 1 to 3 digits.	246	3	Delivery Address Country Code	Numeric ISO 3166 country code of the invoice payer's delivery address. Returned only for invoices and only when available. Note that the value is not necessarily the same as in payment request.
s-t-1-6_card-expected-validity	Date formatted as MMyyyy.	122012	4	Expiration date	Card expiration dates. Returned when i-t-1-1_save-payment-method = 1|2 via payment interface or list-saved-payment-methods is used via server interface.

Payment Success Result Form Example

```
<form id="integration-form" action="http://127.0.0.1:8081/test-shop/receipt"
method="post">
<input type="hidden" readonly="" name="i-f-1-11_interface-version" value="2">
<input type="hidden" readonly="" name="i-f-1-3_order-currency-code" value="978">
<input type="hidden" readonly="" name="s-t-1-26_filing-code" value="1234567890">
<input type="hidden" readonly="" name="s-f-1-20_reference-number"
value="1230000045678">
<input type="hidden" readonly="" name="l-f-1-20_order-gross-amount" value="1230">
<input type="hidden" readonly="" name="s-f-1-10_software-version" value="1.0.1467">
<input type="hidden" readonly="" name="l-f-1-20_transaction-number"
value="5120103424">
<input type="hidden" readonly="" name="s-f-1-36_order-number" value="1325141401745">
<input type="hidden" readonly="" name="s-f-1-40_payment-method"
value="nordea-e-payment">
<input type="hidden" readonly="" name="s-t-1-36_order-note" value="x213">
<input type="hidden" readonly="" name="s-t-256-256_signature-one"
value="27F6C1B8EFDD6B10F33D8D09FE1565B79C1937CEF128D972E01162BDA200727E5CE21BA1B3BE461
43763BE31EE372F7D71AE91153703B04BCBCF9396BBC9681EB3862B31B29D21CCC0F552E0871018EC03793
AC2BFD0EC1BE9325E9A3E3BC2B4BDC89BCD222593BC7B78B0C80A3A9254CBDCBF3B7D07B059910B968189F
C5AD5">
<input type="hidden" readonly="" name="s-t-256-256_signature-two"
value="295601A35A4117AE6F2FABE35ED24CA4E2569CF59E87CBB759465E8E89A86E7F57B223FC9C33F5B
6856734A77E450BCD599D51118C5F9408B66C3B0E32EC6088414E76B43F2912549D26FC3FE1F8DD6C7A13C
FCC75A44BECD00CC1290B8147A9929DD1094C9558062F7CA9533E5E92B76B233C8DB6B7D4BC057A82E671C
5667F">
<input type="hidden" readonly="" name="t-f-14-19_order-timestamp" value="2011-12-29
06:50:01">
<input class="forward-button" type="submit" name="s-t-1-40_shop-receipt__phase"
value="Siirry kuittisivulle">
</form>
```

Checking Payment Success Result

It is important to do the following checks on the success result:

1. l-f-1-20_transaction-number must be present in the response.
2. s-t-256-256_signature-one or/and s-t-256-256_signature-two are valid.
3. s-f-1-36_order-number and t-f-14-19_order-timestamp matches to the payment request. All shop systems should save order number and order time stamp before sending the payment request and check that the values in response matches to the values in the request.
4. l-f-1-20_order-gross-amount and i-f-1-3_order-currency-code matches to the payment request. All shop systems should save amount and currency before sending the payment request and check that the values in response matches to the values in the request.

The above checks are necessary to check that the response is done by Verifone and that the response really is a Payment Success Result. It is strongly advisable to actually check that all of the following parameters are present in the Payment Success Result Post:

- i-f-1-11_interface-version
- i-f-1-3_order-currency-code
- l-f-1-20_order-gross-amount
- s-f-1-10_software-version
- l-f-1-20_transaction-number
- s-f-1-40_payment-method
- s-t-1-36_order-note (if it was provided in request)
- t-f-14-19_order-timestamp
- s-t-1-256_token (if registration of token was requested)

Web Shops should also implement the replacement ";" with ";;" in the parameter values in signature validation for responses (similarly than in requests).

Note that s-t-1-40_shop-receipt__phase is not used in signature calculation by Verifone and should be excluded from the checks.

Payment Success Result Post Response

On successful processing of the post shop system will respond with HTTP status 200 OK. Any other response code indicates availability problem in the shop system.

Payment Cancel Result Post

Payment Cancel Result Form Parameters

Name	Format	Example Value	Title	Description
s-f-1-36_order-number	String with length of 1-36 characters.	123	Order Number	Textual order number assigned by shop system. Valid characters are a-z, A-Z, 0-9 and minus sign.
s-t-1-30_cancel-reason	String with length of 1-30 characters.	cancel-payment-rejected	Cancel Reason	The reason of payment cancellation.
s-f-1-10_software-version	String with length of 1-10 characters.	1.0.1	Version	Version of the payment system.
i-f-1-11_interface-version	String with length of 1-11 numeric characters.	1	Version	Version of the payment interface.
s-t-256-256_signature-one	String with length of 512 characters.	fa12...ff	Signature One	256 byte signature converted to lower case hexadecimal string. String length will be 512 characters but the parameter name includes 256 due to backwards compatibility issues
s-t-256-256_signature-two	String with length of 512 characters.	fa12...ff	Signature Two	256 byte signature converted to lower case hexadecimal string. String length will be 512 characters but the parameter name includes 256 due to backwards compatibility issues

Payment Cancel Result Form Example

```
<form action="http://127.0.0.1:8081/test-shop/cancel" method="post">
<input type="hidden" readonly="" name="i-f-1-11_interface-version" value="2">
<input type="hidden" readonly="" name="s-f-1-10_software-version" value="1.0.1467">
<input type="hidden" readonly="" name="s-f-1-36_order-number" value="1325141018121">
<input type="hidden" readonly="" name="s-t-1-30_cancel-reason"
value="cancel-payment-expired">
<input type="hidden" readonly="" name="s-t-256-256_signature-one"
value="46D30C64DF91453F2B026222DDFDB78425B1FDFC7636F355D881674DCABBF95EDE2100A95971AB8
23C9B52CFADB595895C8818664B9E4BA2C2F958B61C19EB283DCB4CC7EF0C8D91B93B0A5D3E5D95B1C10FF
6F5D37DC134B3E215EEE6974DFF7AD7010C24C731BBC3863BDBC3B57C4A104D5DEB46398A834AC1073624D
3075A">
<input type="hidden" readonly="" name="s-t-256-256_signature-two"
value="5B498C3BAB60351A03CF5DF90AEE441F85E3F64EC6E091207A7FC9C023341F8F8D2D18D39008516
F54FBC7DC78DA65D323AD463F74E82081D5676762C83B903E9499FC8758806D5061A2D2A5423D585AE8FE6
914C5AD442F2CA9951264748E039D7B5C8C41DAAEB5504F0275FB074EC9E128F5EA90DA946404AF1F77D70
594CE">
<input class="backward-button" type="submit" name="s-t-1-40_shop-order__phase"
value="Takaisin tilaussivulle">
</div>
</form>
```

Payment Cancel Result Post Response

On successful processing of the post shop system will respond with HTTP status 200 OK. Any other response code indicates availability problem in the shop system.

Usage

Service Agreement

Service agreement is required for using and testing Payment Interface. The service agreement can be acquired through Verifone sales:

Finland

Phone: +358 9 477 433 40
Email: myynti@point.fi

Norway

Sales/Call center: kundeservice@point.no

Email: support@point.no

Phone 1st line: +47 815 02 200

Technical Support

Technical support for integration is available through Verifone customer support:

Finland

Email: asiakaspalvelu@point.fi

Norway

Mail Incident Manager: incidentmanager@point.no

Phone Incident Manager: +47 969 01 873

Mail Crisis Management Team: IM-drift@point.no

Exchanging Keys

Customer generates 1024 bit long RSA private key - public key pair (or self signed X.509 certificate) and delivers the their public key in PEM format (or certificate in .cer format) to Verifone via TCS Client.

Customer can use point-key-pair-generator.jar to generate the keys. The key pair generator is provided in the integration kit. The key pair generator will generate public key PEM-file, unencrypted private key PEM-file and P12-file containing both public key and encrypted private key.

```
java -jar point-key-pair-generator.jar
```

Verifone delivers Verifone E-Commerce System public key to the customer via Verifone TCS reporting service.

Implementation

Testing

It is recommended to test the implementation first in customer test environment with demo merchant keys. The demo merchant agreement code is 'demo-merchant-agreement'. The demo keys are provided in integration kit.

The password for demo-merchant-agreement.p12 is 'password' (without quotes).

Customer test environment is available in the following URL:

Payment Page: https://epayment.test.point.fi/pw/payment
Test Shop: https://epayment.test.point.fi/test-shop/

Production

Production environment URLs are:

Node 1: https://epayment1.point.fi/pw/payment
Node 2: https://epayment2.point.fi/pw/payment

Node 3: https://epayment3.point.fi/pw/payment Note: Node 3 is for future expansion, and isn't currently in use.

Appendix

PaymentMethod enumeration

Payment method code (s-t-1-30_payment-method-code / s-f-1-30_payment-method-code)	Payment method type (s-t-1-30_payment-method-type)	Type of payment	Notes
visa	VISA	CARD	
master-card	MASTER_CARD	CARD	
s-pankki-verkkomaksu	S_PANKKI_VERKKOMAKSU	BANK	
aktia-maksu	AKTIA_MAKSU	BANK	
op-pohjola-verkkomaksu	OP_POHJOLA_VERKKOMAKSU	BANK	
nordea-e-payment	NORDEA_E_PAYMENT	BANK	
sampo-web-payment	SAMPO_WEB_PAYMENT	BANK	
tapiola-verkkomaksu	TAPIOLA_VERKKOMAKSU	BANK	
handelsbanken-e-payment	HANDELSBANKEN_E_PAYMENT	BANK	
alandsbanken-e-payment	ALANDSBANKEN_E_PAYMENT	BANK	
nordea-se-db	NORDEA_SE_DB	BANK	
handelsbanken-se-db	HANDELSBANKEN_SE_DB	BANK	
swedbank-se-db	SWEDBANK_SE_DB	BANK	
seb-se-db	SEB_SE_DB	BANK	
invoice-collector	INVOICE_COLLECTOR	INVOICE	Collector requires basket items in the request.
bank-axess	BANK_AXESS	BANK	
dankort	DANKORT	CARD	
nordea-dk-db	NORDEA_DK_DB	BANK	
danske-netbetaling	DANSKE_NETBETALING	BANK	
handelsbanken-se-invoice	HANDELSBANKEN_SE_INVOICE	INVOICE	
amex	AMEX	CARD	
diners	DINERS	CARD	
handelsbanken-se-account	HANDELSBANKEN_SE_ACCOUNT	INVOICE	
svea-webpay-invoice	SVEA_WEBPAY_INVOICE	INVOICE	
svea-webpay-installment	SVEA_WEBPAY_INSTALLMENT	INVOICE	
seb-lt	SEB_LT	BANK	
seb-lv	SEB_LV	BANK	
dnb-lv	DNB_LV	BANK	

dnb-lt	DNB_LT	BANK	
pop-pankin-verkkomaksu	POP_PANKIN_VERKKOMAKSU	BANK	
saastopankin-verkkomaksu	SAASTOPANKIN_VERKKOMAKSU	BANK	