

Point eCommerce Server Interface

Point eCommerce Server Interface V.1.36

Document Change History

| Version | Date | Author | Position | Comment |
|----------|------------|-----------------|-------------------------|--|
| 5.0.5 | 01.09.2014 | Kristaps Kohs | Software Developer | Added Generate Payment link |
| 5.0.4 | 19.08.2014 | Evgeni Kappinen | Software Developer | updating payment method list |
| 5.0.3 | 06.06.2014 | Cristina Aldea | Software Developer | Added Server Interface DeleteToken operation. |
| 5.0.2 | 19.05.2014 | Evgeni Kappinen | Software Developer | Added payment methods: svea-webpay-installment, svea-webpay-invoice |
| 5.0.1 | 09.04.2014 | Cristina Aldea | Software Developer | Added Server Interface SaveToken and GetToken operations. |
| 5.0.0 | 17.3.2014 | Björn Delin | Software Developer | Added Server Interface Cancel Task. |
| 4.0.2 | 21.02.2014 | Evgeni Kappinen | Software Developer | Added s-t-1-6_card-expected-validity |
| 4.0.1 | 21.2.2014 | Sampo Korhonen | Software Developer | Added s-f-1-20_reference-number |
| 3.0.2.37 | 17.02.2014 | Kristaps Kohs | Software Developer | Added new partial capture parameters. |
| 3.0.2.36 | 27.1.2014 | Tiina Virta | Technical Documentation | Added contact info for Norway. |
| 3.0.2.35 | 3.12.2013 | Tiina Virta | Technical Documentation | Added appendix to the end and did minor cleaning up. |
| 3.0.2.34 | 8.11.2013 | Markku Hyppönen | Support Coordinator | Description of parameter s-f-1-30_software updated. |
| 3.0.2.33 | 21.10.2013 | Markku Hyppönen | Support Coordinator | Contact information part edited. Added subtitle 'Finland'. Information for all markets will be added soon. |
| 3.0.2.32 | 18.9.2013 | Joonas Kekoni | Software Developer | Added unit gross cost, and fixed unit gross cost |
| 3.0.2.31 | 12.9.2013 | Lassi Lehtinen | Project Manager | Updated production and customer test environment URLs. |
| 3.0.2.30 | 6.9.2013 | Markku Hyppönen | Scrum Master | Process payment and list saved payment methods descriptions improved. Some misleading texts removed. |

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|----------|------------|-----------------|----------------------------------|--|
| 3.0.2.29 | 16.08.2013 | Cristina aldea | Software Developer | Updated l-t-1-20_saved-payment-method-id as mandatory parameter for process-payment and remove-saved-payment-method methods. |
| 3.0.2.28 | 14.06.2013 | Kristaps Kohs | Software Developer | Added Server interface error codes |
| 3.0.2.27 | TBA | Björn Delin | Software Developer | Decreased max length of payment-method-type parameter from 40 to 30 |
| 3.0.2.26 | 27.5.2013 | Björn Delin | Software Developer | Increased max length of payment-method-type parameter from 30 to 40 |
| 3.0.2.25 | 16.5.2013 | Markku Hyppönen | Scrum Master | Currency code descriptions fixed payment-method-type |
| 3.0.2.24 | 15.5.2013 | Risto Virtanen | Software Developer | Increased max length of encrypted-card-details parameter from 256 to 512. |
| 3.0.2.23 | 8.5.2013 | Tommi Laukkanen | Head of Research and Development | Updated production URLs. |
| 3.0.2.22 | 16.4.2013 | Markku Hyppönen | Scrum Master | Payment status codes added to get payment status operation description. |
| 3.0.2.21 | 12.4.2013 | Risto Virtanen | Software Developer | Updated description of basket items of refund operation. |
| 3.0.2.20 | 10.4.2013 | Risto Virtanen | Software Developer | Updated save-card-payment-method's additional request fields |
| 3.0.2.19 | 22.3.2013 | Risto Virtanen | Software Developer | Added notification about creation of recurring subscription and recurring payment. |
| 3.0.2.18 | 20.3.2013 | Risto Virtanen | Software Developer | Removed token-included parameter. |
| 3.0.2.17 | 28.2.2013 | Tommi Laukkanen | Head of Research and Development | Clarified collation when ordering parameters for signature content. Updated production URLs. |
| 3.0.2.16 | 15.2.2013 | Risto Virtanen | Software Developer | Added token parameters. |
| 3.0.2.15 | 1.2.2013 | Risto Virtanen | Software Developer | Added optional parameter s-t-1-26_filing-code to Payment process' additional response fields. |

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|----------|------------|-----------------|----------------------------------|---|
| 3.0.2.14 | 20.12.2012 | Antti Julku | QA Engineer | Fixed incorrect parameter name for list-transaction-numbers, should be l-f-1-20_transaction-number instead of l-f-1-20_transaction-id. |
| 3.0.2.13 | 19.12.2012 | Tommi Laukkanen | Head of Research and Development | Fixed incorrect parameter names. |
| 3.0.2.12 | 2.11.2012 | Markku Hyppönen | Scrum Master | Recurring payment subscription code parameter added for operation list saved payment options. |
| 3.0.2.11 | 9.10.2012 | Markku Hyppönen | Scrum Master | Operation list-transaction-ids renamed as list-transaction-number and payment method added to response message parameters. |
| 3.0.2.10 | 5.10.2012 | Jarno Tammelin | Quality Assurance Engineer | Formatting changes for pdf export. |
| 3.0.2.9 | 27.9.2012 | Markku Hyppönen | Scrum Master | Production environment URLs fixed. |
| 3.0.2.8 | 25.9.2012 | Markku Hyppönen | Scrum Master | Added operation for listing transaction IDs. |
| 3.0.2.7 | 25.9.2012 | Markku Hyppönen | Scrum Master | Added operation for removing saved payment option. |
| 3.0.2.6 | 25.9.2012 | Tommi Laukkanen | Head of Research and Development | Added buyer external identifier parameter to buyer details. |
| 3.0.2.5 | 11.9.2012 | Markku Hyppönen | Scrum Master | Counter suffix in response fields unified. There were some _<N> suffixes while it should be -<N> |
| 3.0.2.4 | 10.8.2012 | Jarno Tammelin | Tester | Removed "Can be empty" from Process payment VAT and discount percentages' descriptions. |
| 3.0.2.3 | 13.7.2012 | Henri Huhtamäki | Quality Assurance Manager | Fixed test address from "/si" to "/serverinterface". |
| 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 | Minor addition (merchant agreement code) to post result checking instructions. |
| 3.0.2.0 | 13.6.2012 | Henri Huhtamäki | Quality Assurance Manager | Added 3.0.2 version to match to that of Payment interface. Did minor fixes on parameters. Added instructions for checking post results. |

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|---------|-----------|-----------------|----------------------------------|---|
| 3.0.1.2 | 30.5.2012 | Henri Huhtamäki | Quality Assurance Manager | Fixed e-mail variable lengths from max 30 to max 100 to match actual implementation. |
| 3.0.1.1 | 30.5.2012 | Tommi Laukkanen | Head of Research and Development | Added document change history. |
| 3.0.1.0 | 29.5.2012 | Tommi Laukkanen | Head of Research and Development | Updated interface version 3.0.1 to document. Changes were done on payment interface. No changes to server interface. |
| 3.0.0.0 | 2.3.2012 | Tommi Laukkanen | Head of Research and Development | Created initial server interface description for interface version 3.0.0. First E-Commerce interface version to include server interface. |

Table of Contents

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Introduction

This document describes integration process and server to server interface between a web shop (later a shop system) and Point E-Commerce System (later the payment system). The interface is designed to operate over HTTPS (Hypertext Transfer Protocol Secure). Authentication of both systems and verification of message integrity is implemented using digital signatures.

Interface Change Log

Version 5.0.0

Added Server Interface Cancel Task.

Version 3.0.2

Completely backwards incompatible with 3.0.1 version.

Interface Description

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

Processes

Transport

Transport between shop system and payment system is carried out using POST operations over HTTPS (Hypertext Transfer Protocol Secure) which is combination of HTTP (Hypertext Transfer Protocol) and TLS (transport layer security). Only server side certificate granted by public certificate authorities are used in transport layer security. Post and response contents are encoded with 'application/x-www-form-urlencoded'-encoding with UTF-8 character set.

Security

Digital signatures are used to authenticate participating systems and 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

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

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

Example of the Signed Parameter Content

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

Digital Signature Types

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

URLs

Operations

General Request and Response Header Fields

Request Header

| Name | Format | Opt | Example Value | Title | Version | Description |
|----------------------------------|--|-----|---------------------|-------------------------|---------|--|
| s-f-1-30_operation | String with length of 1-30 characters. | No | is-available | Operation | 3 | The operation which this request is requesting to be invoked. |
| l-f-1-20_request-id | Long integer value formatted as string with 1-20 numeric characters. | No | 100 | Request ID | 3 | Unique request identifier per merchant agreement. |
| t-f-14-19_request-timestamp | yyyy-MM-dd HH:mm:ss | No | 2012-06-13 16:00:02 | Request Timestamp | 3 | Timestamp defining the request time from web shop point of view. |
| 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-1-30_software | String with length of 1-30 characters. | No | My Shop Software | Software | 3 | Name of the web shop software (Merchant determines) |

| | | | | | | |
|----------------------------|--|-----|-----------|-------------------|---|---|
| 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 | 3 | Interface Version | 3 | Version of the payment interface. |
| s-t-256-256_signature-one | String with length of 256-512 characters. | Yes | FA12...FF | Signature One | 3 | 128 byte signature converted to upper case hexadecimal string. Parameter name includes 256 due to backwards compatibility issues. |
| s-t-256-256_signature-two | String with length of 256-512 characters. | Yes | FA12...FF | Signature Two | 3 | 128 byte signature converted to upper case hexadecimal string. Parameter name includes 256 due to backwards compatibility issues. |

Response Header

| Name | Format | Opt | Example Value | Title | Version | Description |
|------------------------------|--|-----|-----------------------------|--------------------|---------|---|
| s-f-1-30_operation | String with length of 1-30 characters. | No | is-available | Operation | 3 | The operation which was requested to be invoked. |
| l-f-1-20_response-id | Long integer value formatted as string with 1-20 numeric characters. | No | 100 | Response ID | 3 | Unique response identifier per merchant agreement. |
| t-f-14-19_response-timestamp | yyyy-MM-dd HH:mm:ss | No | 2012-06-13 16:00:02 | Response Timestamp | 3 | Timestamp defining the response time from payment system point of view. |
| l-f-1-20_request-id | Long integer value formatted as string with 1-20 numeric characters. | No | 100 | Request ID | 3 | Unique request identifier per merchant agreement. |
| s-f-1-30_error-message | String with length of 1-30 characters. | Yes | No such merchant agreement. | Error message | 3 | The error which occurred. |
| 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 | 3 | Interface Version | 3 | Version of the payment interface. |

| | | | | | | |
|---------------------------|---|-----|-----------|---------------|---|---|
| s-t-256-256_signature-one | String with length of 256-512 characters. | Yes | FA12...FF | Signature One | 3 | 128 byte signature converted to upper case hexadecimal string. Parameter name includes 256 due to backwards compatibility issues. |
| s-t-256-256_signature-two | String with length of 256-512 characters. | Yes | FA12...FF | Signature Two | 3 | 128 byte signature converted to upper case hexadecimal string. Parameter name includes 256 due to backwards compatibility issues. |

Cancel Payment (cancel-payment)

Operation for canceling a payment.

Additional Request Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|------------------------------|---|-----|---------------|--------------------|---------|---|
| l-f-1-20_transaction-number | Integer value formatted as string with 1-20 numeric characters. | No | 123 | Transaction Number | 5 | Transaction number identifying the payment transaction. Assigned by payment system. |
| s-f-1-30_payment-method-code | String with length of 1-30 characters. | No | visa | Payment Method | 5 | String key identifying the payment method used. |

Additional Response Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|------------------------------|--|-----|---------------|---------------------|---------|---|
| s-f-1-30_payment-result-code | String with length of 1-30 characters. | No | success | Payment Result Code | 5 | Code identifying status of the cancel payment |

Is Available (is-available)

Operation for testing connectivity, signatures and requesting availability status of server interface for the merchant agreement.

Additional Request Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|------|--------|-----|---------------|-------|---------|-------------|
|------|--------|-----|---------------|-------|---------|-------------|

Additional Response Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|------|--------|-----|---------------|-------|---------|-------------|
|------|--------|-----|---------------|-------|---------|-------------|

| | | | | | | |
|----------------------|---|----|---|-------------------------------|---|--|
| i-f-1-1_availability | Integer value formatted as string with 1 numeric character. | No | 0 | Server Interface Access Level | 3 | <p>0 = No access to Server Interface has been granted by Point. 1 = Express level access to Server Interface. 2 = Advanced level access to Server Interface.</p> <p>If you receive value 0 then contact Point in order to activate ServerInterface access.</p> |
|----------------------|---|----|---|-------------------------------|---|--|

List Payment Methods (list-payment-methods)

Operation for listing available payment methods and their amount limits for the merchant agreement.

Additional Request Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|-----------------------|---|-----|---------------|---------------|---------|---------------------------------|
| i-f-1-3_currency-code | String with length of 1-3 numeric characters. | No | 978 | Currency Code | 3 | Numeric ISO 4217 currency code. |

Additional Response Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|----------------------------------|--|-----|---------------|-------------------------------|---------|--|
| s-t-1-30_payment-method-code-<N> | String with length of 1-30 characters. | Yes | visa | Payment Method | 3 | The payment method code. Value can be found in Appendix (please see the end of this document) |
| l-t-1-20_payment-method-min-<N> | Long integer value formatted as string with 1-20 numeric characters. | Yes | 0 | Payment Method Minimum Amount | 3 | Minimum amount for the payment method. |
| l-t-1-20_payment-method-max-<N> | Long integer value formatted as string with 1-20 numeric characters. | Yes | 10000 | Payment Method Maximum Amount | 3 | Maximum amount for the payment method. |
| s-t-1-30_payment-method-type-<N> | String with length of 1-40 characters. | Yes | VISA | Payment Method Type | 3 | Type of the payment method. Value can be found in Appendix (please see the end of this document) |

List Saved Payment Methods (list-saved-payment-methods)

Operation for listing saved payment methods for given buyer.

Additional Request Fields

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| Name | Format | Opt | Example Value | Title | Version | Description |
|--|--|-----|----------------------|-------------------------------------|---------|--|
| 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 234234234 | 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. Not recommended to be used. Will be replaced identification mechanism based on other mandatory user details. |
| 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_recurring-payment-subscription-code | String with length of 0,1-30 characters. | Yes | 123 | Recurring Payment Subscription Code | 3 | Subscription code for recurring payment. When given lists only saved payment methods related to subscription. |

Additional Response Fields

| Name | Format | Opt | Example Value | Version | Title | Description |
|-----------------------------------|--|-----|---------------|---------|----------------|--------------------------|
| s-t-1-30_payment-method-code-CCN> | String with length of 1-30 characters. | Yes | visa | 3 | Payment Method | The payment method code. |

| | | | | | | |
|------------------------------------|--|-----|-----------------|---|----------------------|---------------------------------|
| l-t-1-20_payment-method-id-<N> | Long integer value formatted as string with 1-20 numeric characters. | Yes | 2426425 | 3 | Payment Method ID | ID of the saved payment method. |
| s-t-1-30_payment-method-title-<N> | String with length of 1-30 characters. | Yes | 455566*****8887 | 3 | Payment Method Title | The title of payment method. |
| s-t-1-6_card-expected-validity-<N> | String with length of 1-6 characters | Yes | | 4 | | |

Remove Saved Payment Method (remove-saved-payment-method)

Operation for removing saved payment method.

Additional Request Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|----------------------------------|--|-----|---------------|-------------------------|---------|---------------------------------|
| l-t-1-20_saved-payment-method-id | Long integer value formatted as string with 1-20 numeric characters. | No | 242 | Saved Payment Method ID | 3 | ID of the saved payment method. |

Additional Response Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|------------------------|--|-----|---------------|---------------|---------|--|
| l-t-1-10_removed-count | Long integer value formatted as string with 1-10 numeric characters. | Yes | 1 | Removed Count | 3 | 0 = Payment method not removed, 1 = Payment method removed |

Process Payment (process-payment)

Additional Request Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|-----------------------------|---------------------------------------|-----|---------------------|-------------------|---------|--|
| locale-f-2-5_payment-locale | String with length of 2-5 characters. | No | fi_FI | Locale | 3 | The language locale used by buyer. |
| t-f-14-19_payment-timestamp | yyyy-MM-dd HH:mm:ss | No | 2010-01-01 01:01:32 | 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_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 | Long integer value formatted as 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. |
| 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 234234 | 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. Not recommended to be used. Will be replaced identification mechanism based on other mandatory user details. |
| 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. |
| l-t-1-20_saved-payment-method-id | Long integer value formatted as string with 1-20 numeric characters. | No | 242 | Payment Method ID | 3 | ID of the saved payment method. |
| i-t-1-1_recurring-payment | Integer with value 0 or 1. | Yes | 1 | Recurring Payment | 3 | Integer defining that payment is recurring payment. 0) Not recurring payment. 1) A recurring payment. It must be noted that the recurring subscription must be created via Payment interface. |
| 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. Both payment authorization and debiting will be done. 1) Deferred payment. Only authorization will be done. |
| s-t-1-4_card-security-code | String with length of 1-4 characters. | Yes | 123 | Card Security Code | 3 | The card security code. |
| i-t-1-1_register-token | Integer with value 0 or 1. | Yes | 1 | Register Token | 3 | Integer defining if a token should be registered for the card that is used. |

0-50 basket items supported and they are only viewed to user as reminder of what the order contains.

| | | | | | | |
|----------------------|--|-----|-----------|-----------|---|-----------------------------------|
| s-t-1-30_bi-name-<N> | String with length of 1-30 characters. | Yes | Red Apple | Item Name | 3 | Item name of the Nth basket item. |
|----------------------|--|-----|-----------|-----------|---|-----------------------------------|

| | | | | | | |
|---------------------------|--|-----|-----|----------------|---|---|
| I-t-1-20_bi-unit-cost-<N> | <p>Long integer value formatted as string with 1-20 numeric characters. Must not be present if unit gross cost is used.</p> <p>Must be filled if unit gross cost is not filled. Must not be filled if it is.</p> | Yes | 100 | Item Unit Cost | 3 | <p>Unit cost with two decimal precision but without discount and tax. Example value corresponds to 1 EUR.</p> <p>NOTE: usage of unit cost instead of unit gross cost can create rounding errors, when refunding individual items.</p> <p>If you for example have gross cost of 89.00 EUR, there is no corresponding unit cost with discount 0% and GST 24%. 77.17 EUR and 24% GST is 88.99 EUR, but 77.18 EUR lead to gross cost of 89.01 EUR.</p> <p>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 he will get full refund.)</p> <p>The solution to this problem is either to use unit gross cost, or calculate unit cost first and calculate gross cost by adding GST, and not by calculating GST from unit gross cost, because if one does it this way, there will be rounding errors unless prices are selected not to have them, since EURO and other currencies are finitely dividable.</p> |
|---------------------------|--|-----|-----|----------------|---|---|

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|------------------------------------|---|-----|------|--------------------------|---|---|
| I-t-1-20_bi-unit-gross-cost-<N> | Long integer value formatted as 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 | 3 | Unit cost with two decimal precision, with discount and tax. Example value corresponds to 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 | 3 | Number of units in the item. |
| I-t-1-20_bi-gross-amount-<N> | Long integer value formatted as string with 1-20 numeric characters. | Yes | 100 | Item Gross Amount | 3 | Item gross amount including tax and discount with two decimal precision. Example value corresponds to 1 EUR. |
| I-t-1-20_bi-net-amount-<N> | Long integer value formatted as string with 1-20 numeric characters. | Yes | 100 | Item Net Amount | 3 | Item net amount calculated from unit cost times unit count with two decimal precision. 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 | 3 | Item value added tax percentage with two decimal precision. Example value corresponds to 22,5%. 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 | 3 | Item discount percentage tax with two decimal precision. Example value corresponds to 5,5%. Currently, cannot be an empty string nor missing. |

Additional Response Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|-----------------------------|---|-----|---------------|--------------------|---------|---|
| I-f-1-20_transaction-number | Integer value formatted as string with 1-20 numeric characters. | No | 123 | Transaction Number | 3 | Transaction number identifying the payment transaction. Assigned by payment system. |

| | | | | | | |
|------------------------------|--|-----|---------------------|-----------------|---|--|
| s-f-1-30_payment-method-code | String with length of 1-30 characters. | No | visa | Payment Method | 3 | String key identifying the payment method used. |
| 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. |
| s-t-1-36_order-note | String with length of 1-36 characters. | Yes | Example note. | Order Note | 3 | Custom parameter reserved for shop system to use echoed back to shop. |
| 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. |
| 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 | Long integer value formatted as string with 1-20 numeric characters. | No | 100 | Gross Amount | 3 | Gross amount including tax with two decimal |
| s-t-1-26_filing-code | String with length of 1-26 characters. | Yes | 1234567890 | Filing code | 3 | Filing code of the transaction |
| s-t-1-256_token | String with length of 0 or 1-256 characters. | Yes | 100 | Token | 3 | Token that was registered for the card that the used. |

Debit Payment (debit-payment)

Operation for triggering payment debit in case of deferred payment.

Additional Request Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|------------------------------|---|-----|---------------|--------------------|---------|---|
| l-f-1-20_transaction-number | Integer value formatted as string with 1-20 numeric characters. | No | 123 | Transaction Number | 3 | Transaction number identifying the payment transaction. Assigned by payment system. |
| s-f-1-30_payment-method-code | String with length of 1-30 characters. | No | visa | Payment Method | 3 | The payment method code. |
| 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. |
| I-f-1-20_order-gross-amount | Long integer value formatted as 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. |
| i-t-1-1_partial-capture | Integer value 0(false) or 1(true) | Yes | 1 | Partial Capture | 3 | Flag indicating if debit is partial, and remaining order should be left open for future debits. |

0-50 basket items supported and they are only viewed to user as reminder of what the order contains.

Request must have all the order items that are to be debited, order items are matched by id.

Additional Response Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|------------------------------|--|-----|---------------|--------------------|---------|---|
| I-f-1-20_transaction-number | Integer value formatted as string with 1-20 numeric characters. | No | 123 | Transaction Number | 3 | Transaction number identifying the payment transaction. Assigned by payment system. |
| s-f-1-30_payment-method-code | String with length of 1-30 characters. | No | visa | Payment Method | 3 | String key identifying the payment method used. |
| 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. |
| I-f-1-20_order-gross-amount | Long integer value formatted as string with 1-20 numeric characters. | No | 100 | Gross Amount | 3 | Gross amount including tax with two decimal |

Refund Payment (refund-payment)

Operation for refunding payments.

Additional Request Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|------------------------------|---|-----|---------------|--------------------|---------|---|
| I-f-1-20_transaction-number | Integer value formatted as string with 1-20 numeric characters. | No | 123 | Transaction Number | 3 | Transaction number identifying the payment transaction. Assigned by payment system. |
| s-f-1-30_payment-method-code | String with length of 1-30 characters. | Yes | visa | Payment Method | 3 | The payment method code. |

| | | | | | | |
|------------------------------|--|-----|---------------|---------------|---|---|
| i-f-1-3_refund-currency-code | String with length of 1-3 numeric characters. | No | 978 | Currency Code | 3 | Numeric ISO 4217 currency code. |
| l-f-1-20_refund-amount | Long integer value formatted as string with 1-20 numeric characters. | No | 100 | Refund Amount | 3 | Amount to refund. Example value corresponds to 1 EUR. |
| 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. |

0-50 basket items supported and they are only viewed to user as reminder of what the order contains.
Order has to have all the basket items that are refunded. Basket items are matched by their id.

Additional Response Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|------------------------------|---|-----|---------------|--------------------|---------|---|
| l-f-1-20_transaction-number | Integer value formatted as string with 1-20 numeric characters. | No | 123 | Transaction Number | 3 | Transaction number identifying the payment transaction. Assigned by payment system. |
| s-f-1-30_payment-method-code | String with length of 1-30 characters. | No | visa | Payment Method | 3 | String key identifying the payment method used. |

Get Payment Status (get-payment-status)

Operation for getting payment status.

Additional Request Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|------------------------------|---|-----|---------------|--------------------|---------|---|
| s-f-1-30_payment-method-code | String with length of 1-30 characters. | No | visa | Payment Method | 3 | The payment method code. |
| l-f-1-20_transaction-number | Integer value formatted as string with 1-20 numeric characters. | No | 123 | Transaction Number | 3 | Transaction number identifying the payment transaction. Assigned by payment system. |

Additional Response Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|-----------------------------|---|-----|---------------|--------------------|---------|---|
| l-f-1-20_transaction-number | Integer value formatted as string with 1-20 numeric characters. | No | 123 | Transaction Number | 3 | Transaction number identifying the payment transaction. Assigned by payment system. |

| | | | | | | |
|------------------------------|--|-----|---------------------|---------------------|---|--|
| s-f-1-30_payment-method-code | String with length of 1-30 characters. | No | visa | Payment Method | 3 | The payment method code. |
| 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. |
| 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 | Long integer value formatted as string with 1-20 numeric characters. | No | 100 | Gross Amount | 3 | Gross amount including tax with two decimal |
| s-f-1-30_payment-status-code | String with length of 1-30 characters. | No | authorized | Payment Method Code | 3 | Code identifying status of the chosen payment method. |
| s-f-1-20_reference-number | String with length of 1-20 characters. | Yes | 1230000045678 | Reference Number | 4 | Point Reference Number of electronic payment. |

Payment Status Codes

Card Payment Status Codes

| Status Code | Description |
|-------------|--|
| committed | CardPayment commitment has been captured and committed |
| settled | CardPayment has been settled by acquiring Bank |
| verified | CardPayment has been verified |
| refunded | CardPayment has been refunded |
| authorized | CardPayment has been authorized |
| cancelled | CardPayment has been cancelled |
| subscribed | CardPayment is used for creating a subscription |

Invoice Payment Status Codes

| Status Code | Description |
|-------------|---|
| committed | InvoicePayment commitment has been received |
| settled | InvoicePayment has been settled by acquiring Bank |
| verified | InvoicePayment has been verified |
| refunded | InvoicePayment has been refunded |
| initiated | InvoicePayment commitment has not been received |

| | |
|-----------|-----------------------------------|
| cancelled | InvoicePayment has been cancelled |
|-----------|-----------------------------------|

Electronic Payment Status Codes

| Status Code | Description |
|-------------|--|
| committed | ElectronicPayment commitment has been received |
| settled | ElectronicPayment has been settled by acquiring Bank |
| verified | ElectronicPayment has been verified |
| refunded | ElectronicPayment has been refunded |
| initiated | ElectronicPayment commitment has not been received |

Error Codes

| Error Code | Description |
|-------------------------------|--|
| system_error | System error occurred while processing request. |
| signature_verification_failed | Indicates that signature verification was not succesful. |
| merchant_agreement_not_found | Indicates that such merchant agreement does not exist. |
| access_denied | Indicates that access level is not sufficient. |
| no_acquirer_agreements | Indicates that no acquirer agreements could be found. |
| buyer_payments_disabled | Indicates that payments are disabled. |
| service_unavailable | Service is currently unavailable |
| invalid_expiration_date | Indicate that payment expiration date is invalid. |
| unknown_saved_payment_method | Indicates that provided saved payment method was not found. |
| not_allow_payment_by_merchant | Indicates that merchant agreement does not allow buyer payments. |
| not_allow_payment_by_acquirer | Indicates that acquirer agreement does not allow buyer payments. |

List Transaction Numbers (list-transaction-numbers)

Operation for listing transaction numbers.

Additional Request Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|-----------------------|--|-----|---------------|--------------|---------|--|
| 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. |

Additional Response Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|---------------------------------|---|-----|---------------|--------------------|---------|---|
| I-f-1-20_transaction-number-<N> | Integer value formatted as string with 1-20 numeric characters. | No | 123 | Transaction Number | 3 | Transaction number identifying the payment transaction. Assigned by payment system. |

| | | | | | | |
|----------------------------------|--|----|------|----------------|---|--------------------------|
| s-f-1-30_payment-method-code-<N> | String with length of 1-30 characters. | No | visa | Payment Method | 3 | The payment method code. |
|----------------------------------|--|----|------|----------------|---|--------------------------|

Save Card Payment Method (save-card-payment-method)

Operation for saving payment method.

Additional Request Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|---------------------------------------|--|-----|----------------------|-------------------------------|---------|--|
| 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 234234234 | Phone Number | 3 | Phone number of the buyer. |
| s-f-1-100_buyer-email-address | String with length of 1-30 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. Not recommended to be used. Will be replaced identification mechanism based on other mandatory user details. |
| 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-f-1-30_payment-method-code | String with length of 1-30 characters. | No | visa | Payment Method | 3 | The payment method code. |

| | | | | | | |
|------------------------------------|---|-----|-----------|------------------------|---|---|
| s-f-256-512_encrypted-card-details | String with length of 256-512 characters. | No | FA12...FF | Encrypted card details | 3 | <PAN>=<MMyyy y> padded with PKCS #1 padding and RSA encrypted and converted to upper case hexadecimal string. |
| i-t-1-1_register-token | Integer with value 0 or 1. | Yes | 1 | Register Token | 3 | Integer defining if a token should be registered for the card that is used. |

Additional Response Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|-------------------------------|--|-----|-----------------|----------------------|---------|---|
| s-f-1-30_payment-method-code | String with length of 1-30 characters. | No | visa | Payment Method | 3 | The payment method code. |
| l-t-1-20_payment-method-id | Long integer value formatted as string with 1-20 numeric characters. | No | 242 | Payment Method ID | 3 | ID of the saved payment method. |
| s-t-1-30_payment-method-title | String with length of 1-30 characters. | No | 455566*****8887 | Payment Method Title | 3 | The title of payment method. |
| s-t-1-256_token | String with length of 0 or 1-256 characters. | Yes | 100 | Token | 3 | Token that was registered for the card that the used. |

Save Token (save-token)

Operation for saving a token for a card.

Additional Request Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|------------------------------------|---|-----|---------------|------------------------|---------|---|
| s-f-1-30_payment-method-code | String with length of 1-30 characters. | No | visa | Payment Method | 5 | The payment method code. |
| s-f-256-512_encrypted-card-details | String with length of 256-512 characters. | No | FA12...FF | Encrypted card details | 5 | <PAN>=<MMyyy y> padded with PKCS #1 padding and RSA encrypted and converted to upper case hexadecimal string. |
| s-t-1-36_service-code | String with length of 1-36 characters. | Yes | service_code | Service Code | 5 | Value Added Service Code |

Additional Response Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|------|--------|-----|---------------|-------|---------|-------------|
|------|--------|-----|---------------|-------|---------|-------------|

| | | | | | | |
|-----------------|--|-----|-----|-------|---|---|
| s-t-1-256_token | String with length of 0 or 1-256 characters. | Yes | 100 | Token | 5 | Token that was registered for the card that was send. |
|-----------------|--|-----|-----|-------|---|---|

Get Token (get-token)

Operation for getting an existing token associated to a card.

Additional Request Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|------------------------------------|---|-----|---------------|------------------------|---------|---|
| s-f-1-30_payment-method-code | String with length of 1-30 characters. | No | visa | Payment Method | 5 | The payment method code. |
| s-f-256-512_encrypted-card-details | String with length of 256-512 characters. | No | FA12...FF | Encrypted card details | 5 | <PAN>=<MMyyy y> padded with PKCS #1 padding and RSA encrypted and converted to upper case hexadecimal string. |
| s-t-1-36_service-code | String with length of 1-36 characters. | Yes | service_code | Service Code | 5 | Value Added Service Code |

Additional Response Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|-----------------|--|-----|---------------|-------|---------|---|
| s-t-1-256_token | String with length of 0 or 1-256 characters. | Yes | 100 | Token | 5 | Token that was registered for the card that was send. |

DeleteToken (delete-token)

Operation for Deleting an existing token associated to a card.

Additional Request Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|------------------------------|---|-----|---------------|----------------|---------|---|
| s-f-1-30_payment-method-code | String with length of 1-30 characters. | No | visa | Payment Method | 5 | The payment method code. |
| s-t-1-256_token | String with length of 1-256 characters. | No | 1234567890 | Token | 5 | The token that was generated by Point. Althow the type is String, valid values are the ones that can be parsed as Long. |
| s-t-1-36_service-code | String with length of 1-36 characters. | Yes | service_code | Service Code | 5 | Value Added Service Code |

Additional Response Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|------------------------|---|-----|---------------|--------------|---------|--|
| l-t-1-10_removed-count | Integer value formatted as string with 1-10 numeric characters. | Yes | 1 | Remove Count | 5 | 0 = Token not removed, 1 = Token removed |

Generate payment link (generate-payment-link)

Additional Request Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|-----------------------------|--|-----|---------------------|-------------------|---------|--|
| locale-f-2-5_payment-locale | String with length of 2-5 characters. | No | fi_FI | Locale | 3 | The language locale used by buyer. |
| t-f-14-19_payment-timestamp | yyyy-MM-dd HH:mm:ss | No | 2010-01-01 01:01:32 | 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_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 | Long integer value formatted as 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 | Long integer value formatted as string with 1-20 numeric characters. | No | 200 | Net Amount | 3 | Order net amount without discount or taxes. |
| l-f-1-20_order-vat-amount | Long integer value formatted as string with 1-20 numeric characters. | No | 100 | Vat amount | 3 | Order VAT amount |
| s-t-1-30_payment-method-code-<N> | String with length of 1-30 characters. | Yes | visa | Payment Method | 3 | The payment method code. Value can be found in Appendix (please see the end of this document) |
| s-t-1-36_payment-link-number | String with length of 1-36 characters. | Yes | 123456789 | Payment link number | 5 | Number of the payment link |
| s-f-1-32_payment-link-delivery-mode | String with length of 1-32 characters | No | EMAIL | Payment link delivery mode | 5 | Delivery mode of payment link, either SMS or EMAIL |
| 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 234234 | 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. Not recommended to be used. Will be replaced identification mechanism based on other mandatory user details. |
| 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. |
| i-t-1-20_saved-payment-method-id | Long integer value formatted as string with 1-20 numeric characters. | No | 242 | Payment Method ID | 3 | ID of the saved payment method. |
| i-t-1-1_recurring-payment | Integer with value 0 or 1. | Yes | 1 | Recurring Payment | 3 | Integer defining that payment is recurring payment. 0) Not recurring payment. 1) A recurring payment. It must be noted that the recurring subscription must be created via Payment interface. |
| 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. Both payment authorization and debiting will be done. 1) Deferred payment. Only authorization will be done. |
| s-t-1-4_card-security-code | String with length of 1-4 characters. | Yes | 123 | Card Security Code | 3 | The card security code. |
| i-t-1-1_register-token | Integer with value 0 or 1. | Yes | 1 | Register Token | 3 | Integer defining if a token should be registered for the card that is used. |

0-50 basket items supported

| | | | | | | |
|----------------------|--|-----|-----------|-----------|---|-----------------------------------|
| s-t-1-30_bi-name-<N> | String with length of 1-30 characters. | Yes | Red Apple | Item Name | 3 | Item name of the Nth basket item. |
|----------------------|--|-----|-----------|-----------|---|-----------------------------------|

| | | | | | | |
|---------------------------|--|-----|-----|----------------|---|---|
| I-t-1-20_bi-unit-cost-<N> | <p>Long integer value formatted as string with 1-20 numeric characters. Must not be present if unit gross cost is used.</p> <p>Must be filled if unit gross cost is not filled. Must not be filled if it is.</p> | Yes | 100 | Item Unit Cost | 3 | <p>Unit cost with two decimal precision but without discount and tax. Example value corresponds to 1 EUR.</p> <p>NOTE: usage of unit cost instead of unit gross cost can create rounding errors, when refunding individual items.</p> <p>If you for example have gross cost of 89.00 EUR, there is no corresponding unit cost with discount 0% and GST 24%. 77.17 EUR and 24% GST is 88.99 EUR, but 77.18 EUR lead to gross cost of 89.01 EUR.</p> <p>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 he will get full refund.)</p> <p>The solution to this problem is either to use unit gross cost, or calculate unit cost first and calculate gross cost by adding GST, and not by calculating GST from unit gross cost, because if one does it this way, there will be rounding errors unless prices are selected not to have them, since EURO and other currencies are finitely dividable.</p> |
|---------------------------|--|-----|-----|----------------|---|---|

| | | | | | | |
|------------------------------------|---|-----|------|--------------------------|---|---|
| I-t-1-20_bi-unit-gross-cost-<N> | Long integer value formatted as 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 | 3 | Unit cost with two decimal precision, with discount and tax. Example value corresponds to 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 | 3 | Number of units in the item. |
| I-t-1-20_bi-gross-amount-<N> | Long integer value formatted as string with 1-20 numeric characters. | Yes | 100 | Item Gross Amount | 3 | Item gross amount including tax and discount with two decimal precision. Example value corresponds to 1 EUR. |
| I-t-1-20_bi-net-amount-<N> | Long integer value formatted as string with 1-20 numeric characters. | Yes | 100 | Item Net Amount | 3 | Item net amount calculated from unit cost times unit count with two decimal precision. 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 | 3 | Item value added tax percentage with two decimal precision. Example value corresponds to 22,5%. 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 | 3 | Item discount percentage tax with two decimal precision. Example value corresponds to 5,5%. Currently, cannot be an empty string nor missing. |

Additional Response Fields

| Name | Format | Opt | Example Value | Title | Version | Description |
|-----------------------------|---|-----|---------------|--------------------|---------|---|
| I-f-1-20_transaction-number | Integer value formatted as string with 1-20 numeric characters. | No | 123 | Transaction Number | 3 | Transaction number identifying the payment transaction. Assigned by payment system. |

| | | | | | | |
|------------------------------|--|-----|---------------------|-----------------|---|--|
| s-f-1-30_payment-method-code | String with length of 1-30 characters. | No | visa | Payment Method | 3 | String key identifying the payment method used. |
| 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. |
| s-t-1-36_order-note | String with length of 1-36 characters. | Yes | Example note. | Order Note | 3 | Custom parameter reserved for shop system to use echoed back to shop. |
| 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. |
| 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 | Long integer value formatted as string with 1-20 numeric characters. | No | 100 | Gross Amount | 3 | Gross amount including tax with two decimal |
| s-t-1-26_filing-code | String with length of 1-26 characters. | Yes | 1234567890 | Filing code | 3 | Filing code of the transaction |
| s-t-1-256_token | String with length of 0 or 1-256 characters. | Yes | 100 | Token | 3 | Token that was registered for the card that the used. |

Usage

Service Agreement

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

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 Point 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
```

Point delivers Point E-Commerce System public key to customer via TCS Client.

Implementation

Checking Response Fields

It is important to do the following checks responses:

- s-f-1-36_merchant-agreement-code is correct.
- s-f-1-30_operation matches to request.
- s-t-256-256_signature-one or/and s-t-256-256_signature-two are valid.
- s-f-1-30_error-message is empty (otherwise it means that the operation failed)
- l-f-1-20_request-id (it is also important to use unique ids in requests)

The above checks are necessary to check that the response is done by Point and that the operation is successful and its integrity is guaranteed. It is strongly advisable to include additional checks, such as checking the format and contents of all response columns and values that are known to the web shop.

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 the integration kit.

Customer test environment is available in the following URL:

Server interface: <https://epayment.test.point.fi/pw/serverinterface>

Test Shop: <https://epayment.test.point.fi/test-shop/>

Production

Production environment URLs are:

Node 1: <https://epayment1.point.fi/pw/serverinterface>

Node 2: <https://epayment2.point.fi/pw/serverinterface>

Node 3: <https://epayment3.point.fi/pw/serverinterface>

Appendix

PaymentMethod enumeration

| payment method code (s-t-1-30_payment-method-code) | payment method type (s-t-1-30_payment_method_type) | type of payment |
|---|---|-----------------|
| 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 |
| 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 |