

# Verifone eCommerce Server to server Interface Reference

## Introduction

This document describes integration process and server to server interface between a web shop and Verifone E-Commerce 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.

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## Document Change History

Version	Date	Author	Position	Comment
6.0.73	11.06.2020	Juan Feng	Software Developer	Added I-t-12-12_card-filing-code to server to server generate-payment-link API
6.0.72	04.06.2020	Markku Hyppönen	Software Developer	Phone number and billing state parameters changed to be optional in lookup
6.0.71	29.05.2020	Juan Feng	Software Developer	Added I-t-12-12_card-filing-code to server to server refund-payment API
6.0.70	20.05.2020	Juan Feng	Software Developer	Added I-t-12-12_card-filing-code to server to server process-payment API
6.0.69	20.09.2019	Mounika Ramamoorthy	Software Developer	Added two parameters i-t-1-2_shipping-method-indicator ,s-t-1-100_delivery-address-email for server to server API 3ds-lookup.
6.0.68	07.08.2019	Catherine Deborah	Software Developer	Added new server to server API 3ds-lookup

6.0.67	08.07.2019	Markku Hyppönen	Software Developer	3DSv2 authentication data parameters (ECI, CAVV, XID, DS-TRANSACTION-ID) added to process-payment.
6.0.66	28.6.2019	Toni Kankkunen	Support Manager	Corrected collation for signature calculation in the documentation.
6.0.65	10.06.2019	Catherine Deborah	Software Developer	Added below new dynamic response parameter in process-payment. i-t-1-3_failed-auth-response  Added new error code payment-requires-3ds
6.0.64	27.2.2019	Priya Prakash	Software Developer	Updated Process invoice payment operation with parameter <ul style="list-style-type: none"> <li>I-f-1-20_order-vat-amount</li> <li>I-f-1-20_order-net-amount</li> <li>i-t-1-4_order-vat-percentage</li> </ul>
6.0.63	26.2.2019	Henri Huhtamäki	Engineering Product Owner	Added i-t-1-1_transaction-initiator to process-payment.
6.0.62	19.2.2019	Visa Korhonen	Software Developer	Added partial capture parameter
6.0.61	18.02.2019	Subrat	Software Developer	Added process invoice payment request, response fields and error message details
6.0.61	13.2.2019	Priya Prakash	Software Developer	Updated Error codes by adding <ul style="list-style-type: none"> <li>s2s-3ds-not-allowed-by-method</li> </ul>
6.0.60	28.1.2019	Henri Huhtamäki	Quality Assurance Manager	Updated get-buyer-details call details.
6.0.59	24.10.2018	Toni Kankkunen	Support Manager	Added AfterPay -specific operations get-sub-payment-methods and get-buyer-details.  Removed new AfterPay parameters added in document versions 6.0.55 and 6.0.57 as these are not used in process-payment; but only in hosted pages payment requests.
6.0.58	05.10.2018	Priya Prakash	Software Developer	Updated validation error codes. <ul style="list-style-type: none"> <li>phone-number-empty</li> <li>non-number-in-phone-number</li> <li>too-long-phone-number</li> <li>too-short-phone-number</li> </ul> Operation related error codes. <ul style="list-style-type: none"> <li>method-not-supported</li> <li>counterpart-not-activated</li> <li>payee-not-enrolled</li> <li>payee-payment-ref-invalid</li> <li>payee-alias-invalid</li> <li>duplicate-payment-request</li> <li>transaction-declined</li> <li>swish-payment-creation-error</li> </ul>
6.0.57	05.10.2018	Vitthal Wable	Project Manager	Added i-t-1-1_existing-buyer for afterPay support
6.0.56	02.10.2018	Markku Hyppönen	Software Developer	Added Vipps and MobilePay to payment method list.
6.0.55	27.09.2018	Vitthal Wable	Project Manager	Added new AfterPay specific parameters to process-payment request: <ul style="list-style-type: none"> <li>s-t-1-30_sub-payment-method-type</li> <li>i-t-1-4_sub-payment-method-profile-number</li> </ul>
6.0.54	17.09.2018	Bhawana Prakash	Software Developer	Updated is-available Operation with if no connectivity then response configured in set-status-response field.
6.0.53	15.09.2018	Priya Prakash	Software Developer	Updated Refund Payment operation with the basket item data table.
6.0.52	10.09.2018	Priya Prakash	Software Developer	Updated Payment Result Code to the corresponding create-payment-request operation and Callback response.
6.0.51	08.09.2018	Priya Prakash	Software Developer	Updated s-t-1-30_payment-status-code to s-t-1-10_payment-request-result for create-payment-request api and Callback response.

6.0.50	06.09.2018	Priya Prakash	Software Developer	<p>Updated create-payment-request api with addition of</p> <ul style="list-style-type: none"> <li>s-t-1-30_delivery-address-line-two</li> <li>s-t-1-30_delivery-address-line-three</li> </ul> <p>And removed l-t-1-20_bi-gross-amount-&lt;N&gt; parameter from create-payment-request api</p>
6.0.49	05.09.2018	Priya Prakash	Software Developer	<p>Removed the following parameter from callback response parameter.</p> <ul style="list-style-type: none"> <li>s-t-1-30_buyer-phone-number</li> <li>s-f-1-100_buyer-email-address</li> </ul> <p>Updated validation error code with</p> <ul style="list-style-type: none"> <li>invalid-phone-number</li> <li>payer-not-enrolled</li> <li>validation-error-callback-url</li> <li>error-missing-callback-url</li> </ul> <p>Updated Callback Response code</p> <ul style="list-style-type: none"> <li>PAID</li> <li>DECLINED</li> <li>FAILED</li> <li>ERROR</li> </ul> <p>Updated Basket item with i-t-1-4_bi-discount-percentage-&lt;N&gt; and l-t-1-20_bi-unit-gross-cost-&lt;N&gt; for create-payment-request operation.</p>
6.0.48	21.08.2018	Priya Prakash	Software Developer	<p>Updated s-t-5-256_callback-url to s-f-5-256_callback-url and added s-f-1-30_error-message parameter on create-payment-request api operation.</p>
6.0.47	11.06.2018	Priya Prakash	Software Developer	<p>Added create-payment-request api operation and Callback notification response parameter field.</p>
6.0.46	23.05.2018	Visa Korhonen	Software Developer	<p>Corrected parameters of 3ds authentication in payment processing and completing</p>
6.0.45	26.04.2018	Vandita Verma	Software Development Engineer	<p>Added i-t-1-1_token-type-identifier and s-t-1-36_token-masked-bank-account parameters to SaveToken and GetToken.</p> <p>Added Server Interface GetToken Info operation.</p>
6.0.44	11.04.2018	Anttu Sohlberg	Software Developer	<p>Changed i-t-2-2_card-3ds-auth-status to i-t-1-2_card-3ds-auth-status, as the latter is the one actually used in application.</p> <p>Added possible return values.</p>
6.0.43	11.04.2018	Anttu Sohlberg	Software Developer	<p>Removed the following parameters, as they are not in use. They have, or have not, been used along with peos-payment-processor's DetokenizeTask. DetokenizeTask is not called from anywhere, so they are obsolete. If DetokenizeTask is put to use again, then consider resurrecting these.</p> <ul style="list-style-type: none"> <li>s-t-1-30_bill-to-address-first-name</li> <li>s-t-1-30_bill-to-address-last-name</li> <li>s-t-1-30_bill-to-address-line-one</li> <li>s-t-1-30_bill-to-address-line-two</li> <li>s-t-1-30_bill-to-address-line-three</li> <li>s-t-1-30_bill-to-address-postal-code</li> </ul>
6.0.42	14.03.2018	Esa Lehti	Java Developer	<p>Added s-t-1-36_service-code optional parameter to process-payment.</p>
6.0.41	09.03.2018	Catherine Deborah	Software Developer	<p>Modified dynamic feedback response parameters for refund-amount and refund-payment</p>
6.0.40	09.03.2018	Bhawana Prakash	Software Developer	<p>Modified error codes failed-contact-swish-service, cancel-pay-reject-incor-amt, invalid-payment-req-collector, delivery-addr-crdr-mismatch, invalid-merchant-agrmt-code in Server Api as previously it was more than 30 character. So reduced its size</p>
6.0.39	12.02.2018	Akhil Balachandran	Software Developer	<p>Added Dynamic feedback parameter s-t-1-1024_dynamic-feedback to list saved payment method in Server Api.</p> <p>Also added s-t-1-36_card-name to Process-payment, Debit-payment, List saved payment methods &amp; Test shop, can be requested as a dynamic parameter (s-t-1-1024_dynamic-feedback) and if requested it will be present in the response.</p>
6.0.38	23.11.2017	Subrat	Software Developer	<p>Added error code details for process-supplementary operation</p>
6.0.37	16.11.2017	Ajay Sharma	Software Developer	<p>Added Dynamic feedback parameter s-t-1-1024_dynamic-feedback to debit payment method in Server Api. Key value present in debit request will be "s-t-1-1024_dynamic-feedback" = "i-t-1-1_consumer-card"</p> <p>Also added i-t-1-1_consumer-card to Process Payment, Debit Payment and HPP request for all card payment.</p>
6.0.36	06.11.2017	Subrat	Software Developer	<p>Added request and response details for process-supplementary operation</p>

6.0.35	13.10.2 017	Abhishek Vashistha	Software developer	Added s-t-2-2_account-item-type and i-t-1-1_payment-benefit to to Process Payment as dynamic feedback parameter and if requested it will be present in response .
6.0.34	04.09.2 017	Catherine Deborah	Software Developer	Added i-t-1-1_partial-approval to process-payment additional request fields and l-t-1-20_authorized-amount to process-payment additional response fields. Added new error codes partial-approval-not-allowed and part-approval-req-deferred-pmt.
6.0.33	30.08.2 017	Anttu Sohlberg	Software Developer	added i-t-4-4_card-pan-last4 to Process Payment - can be requested as a dynamic parameter (s-t-1-1024_dynamic-feedback) and if requested it will be present in the response.
6.0.32	10.08.2 017	Catherine Deborah	Software Developer	Modified s-f-1-256_token to s-t-1-256_token in save-card-payment-method request as it is optional parameter
6.0.31	07.08.2 017	Catherine Deborah	Software Developer	Added new optional parameters to process-payment request.
6.0.30	01.08.2 017	Catherine Deborah	Software Developer	Updated description for s-t-1-256_token in remove-saved-payment-method and added new error code token-terminal-serial-missing in Error codes.
6.0.29	31.07.2 017	Catherine Deborah	Software Developer	Edited description for s-t-1-36_service-code in save-card-payment-method request to specify that service code is also used for token distribution to acquirer.
6.0.28	26.07.2 017	Catherine Deborah	Software Developer	Modified payment method code as optional in save-token, get-token and delete-token requests and added description.
6.0.27	10.07.2 017	Catherine Deborah	Software Developer	Added s-t-1-255_app-id in save-token and get-token additional response fields.
6.0.26	03.07.2 017	Catherine Deborah	Software Developer	Added s-t-1-36_service-code and s-f-1-256_token in save-card-payment-method additional request fields. Added s-f-1-256_token in remove-saved-payment-method additional request fields
6.0.25	21.06.2 017	Catherine Deborah	Software Developer	Removed l-t-1-20_payment_option_id in Save Card Payment Method
6.0.24	15.06.2 017	Anttu Sohlberg	Software Developer	Corrected faulty parameter names.
6.0.23	13.06.2 017	Henri Huhtamäki	QA Manager	Added comments / modified descriptions related to tokens.
6.0.22	18.05.2 017	Sumeet Kumar	Software Developer	Changing i-t-1-8_payment_option_id to l-t-1-20_payment_option_id in Save Card Payment Method
6.0.21	16.05.2 017	Sumeet Kumar	Software Developer	Added i-t-1-8_payment_option_id in Save Card Payment Method
6.0.20	15.05.2 017	Vitthal Wable	Project Manager	Added s-t-1-255_app-id in Save Card Payment Method & updated the information at s-t-1-255_buyer-external-id with customer id
6.0.19	13.04.2 017	Visa Korhonen	Software Developer	Added description of a new operation and new parameters that are related to new 3D secure mode in server interface.
6.0.18	10.04.2 017	Matias Aikio	Software Developer	Some more changes to error codes of length of more than 30 characters.
6.0.17	01.03.2 017	Matias Aikio	Software Developer	Some operation related error codes were of length of more than 30 characters. Shortened those in code and documentation.
6.0.16	10.01.2 017	Toni Kankkunen	Support Manager	Corrected generate-payment-link parameters
6.0.15	04.01.2 017	Priya Prakash	Software Developer	Added swish server-api parameters.
6.0.14	28.11.2 016	Vitthal Wable	Project Manager	1. Remove s-t-1-36_token-masked-pan and s-t-10-10_token-expiration-date parameters. wrong response parameters listed for generate-payment-link(SC-5770) 2. Server API missing list of payment link statuses(SC-5771)
6.0.13	21.09.2 016	Claudiu Chioariu	Software Developer	Removed dynamic parameters from cancel-payment that are not available. Added l-f-1-20_dynamic-reference-number.
6.0.12	20.09.2 016	Claudiu Chioariu	Software Developer	Removed weaver references.
6.0.11	19.09.2 016	Claudiu Chioariu	Software Developer	Removed void-payment.
6.0.10	19.09.2 016	Claudiu Chioariu	Software Developer	Added s-t-1-36_token-masked-pan and s-t-10-10_token-expiration-date parameters.
6.0.9	19.09.2 016	Claudiu Chioariu	Software Developer	s-t-1-8_card-product documentation changed (removed customer specific information).
6.0.8	07.09.2 016	Evgeni Kappinen	Software Developer	Updated payment method enumeration.
6.0.7	15.12.2 015	Claudiu Chioariu	Software Developer	Listed methods not supported in Weaver: list-saved-payment-methods, remove-saved-payment-method, list-transaction-numbers, save-card-payment-method, generate-payment-link, get-payment-link-status, reactivate-payment-link.

6.0.6	07.10.2015	Aseefulla Kamtidar Shaik	Software Developer	Added s-t-1-6_fraud-error-code additional parameter to response fields.
6.0.5	06.10.2015	Claudiu Chioariu	Software Developer	Added s-t-1-30_bill-to-address* (6 params) to get-token and save-token.
6.0.4	17.09.2015	Sandip Kumar Haldar	Software Developer	Added s-f-1-30_payment-method-code in process-payment additional request field.
6.0.3	24.04.2015	Aseefulla Kamtidar Shaik	Software Developer	Added refund-operation additional request and response fields.
6.0.2	24.04.2015	Claudiu Chioariu	Software Developer	Added s-t-1-1024_dynamic-feedback parameter.
6.0.1	16.04.2015	Srinivasulu Vedala	Software Developer	Added void-operation additional request and response fields.
6.0.0	07.04.2015	Björn Delin	Software Developer	Updated save-card-payment-method's additional request fields
5.0.13	10.02.2015	Kristaps Kohs	Software Developer	Added token scope parameter
5.0.12	21.01.2015	Kristaps Kohs	Software Developer	Added reactivate payment link method
5.0.11	19.12.2014	Tiina Virta	Technical Documentation	Amendid field l-f-1-20_request-id
5.0.10	04.11.2014	Kristaps Kohs	Software Developer	Added Get Payment link status method
5.0.9	23.10.2014	Evgeni Kappinen	Software Developer	Added error codes
5.0.8	16.10.2014	Kristaps Kohs	Software Developer	Added sender email and delivery text parameters to payment link.
5.0.7	3.10.2014	Lassi Lehtinen	Project Manager	Fixed table of contents and other minor edits
5.0.6	22.9.2014	Sampo Korhonen	Software Developer	Added Refund Amount -operation
5.0.5	1.9.2014	Kristaps Kohs	Software Developer	Added Generate Payment link
5.0.4	19.8.2014	Evgeni Kappinen	Software Developer	Updated payment method list
5.0.3	6.6.2014	Cristina Aldea	Software Developer	Added Server Interface DeleteToken operation.
5.0.2	19.5.2014	Evgeni Kappinen	Software Developer	Added payment methods: svea-webpay-installment, svea-webpay-invoice
5.0.1	9.4.2014	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	21.2.2014	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	17.2.2014	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.
3.0.2.29	16.8.2013	Cristina aldea	Software Developer	Updated I-t-1-20_saved-payment-method-id as mandatory parameter for process-payment and remove-saved-payment-method methods.
3.0.2.28	14.6.2013	Kristaps Kohs	Software Developer	Added Server interface error codes
3.0.2.27	4.6.2013	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.
3.0.2.14	20.12.2012	Antti Julku	QA Engineer	Fixed incorrect parameter name for list-transaction-numbers, should be I-f-1-20_transaction-number instead of I-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.
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.

## Introduction

This document describes integration process and server to server 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 (Hypertext Transfer Protocol Secure). Authentication of both systems and verification of message integrity is implemented using digital signatures.

## Interface Change Log

### Version 5.0.x

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.

Note that in case of errors only the mandatory fields described in [General Response Headers](#) are compulsory in practice. The operation specific mandatory fields might not be present in case of errors.

## 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

## Operations

General notice, that if parameter is not null-able and is missing from request. Server to server interface will not respond and log internally that parameter is missing.

## 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.
i-f-1-20_request-id	64 bit signed integer value formatted as a 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.
i-f-1-20_response-id	64 bit signed integer value formatted as a 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.
I-f-1-20_request-id	64 bit signed integer value formatted as a 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. Only returned when an error occurs.
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
I-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.
s-t-1-1024_dynamic-feedback	String with length of 1-1024 chars.	Yes	s-t-1-30_card-type, s-t-1-4_error-code, I-f-1-20_dynamic-reference-number	Dynamic feedback	5	List of parameters to be added to response if available.

### 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
I-f-1-20_transaction-number	Integer value formatted as string with 1-20 numeric characters.	No	123	Transaction Number	6	Unique number from identifying the payment transaction.
s-t-1-30_card-type	String with length of 1 to 30.	Yes	visa	Card type	5	Card type.
s-t-1-4_error-code	String with length of 1 to 4.	Yes	H002	Error code	5	Error code, generated by Sales Connector (Hxxx) or received from acquirer (Bxxx).
I-f-1-20_dynamic-reference-number	Integer value formatted as string with 1-20 numeric characters.	Yes	23452345	Dynamic reference number	5	Dynamic reference number.

## Is Available (is-available)

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

If the connectivity is ok then status will be 200 and if there will be no connectivity then response configured in set-status-response field in peos-payment-web-ext.properties

and e.g.: set-status-response = 500 if HTTP 500 needed for no connectivity response

### Additional Request Fields

Name	Format	Opt	Example Value	Title	Version	Description
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## 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	0 = No access to Server Interface has been granted by Verifone. 1 = Express level access to Server Interface. 2 = Advanced level access to Server Interface.  If you receive value 0 then contact Verifone in order to activate Server Interface access.

## 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>	64 bit signed integer value formatted as a 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>	64 bit signed integer value formatted as a 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

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.
s-t-1-1024_dynamic-feedback	String with length of 1-1024 chars.	Yes	s-t-1-36_card-name	Dynamic feedback	5	List of parameters to be added to response if available.

### Additional Response Fields

Name	Format	Opt	Example Value	Version	Title	Description
s-t-1-30_payment-method-code-<N>	String with length of 1-30 characters.	Yes	visa	3	Payment Method	The payment method code.
i-t-1-20_payment-method-id-<N>	64 bit signed integer value formatted as a 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		
s-t-1-1024_encrypted_payment_method_details	String with length of 1-1024 characters.	Yes		5		<PAN>, converted to upper case hexadecimal string. This field will contain the encrypted PAN
s-t-1-36_card-name	String with length of 1-36 characters.	Yes	Classic	5	Card Name	Requested as a dynamic parameter (s-t-1-1024_dynamic-feedback = s-t-1-36_card-name) and if requested it will be present in the response.

### 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
i-t-1-20_saved-payment-method-id	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	242	Saved Payment Method ID	3	ID of the saved payment method.
s-t-1-256_token	String with length of 1-256 characters.	Yes	1234567890	Token	5	The token that was generated by Verifone. Although the type is String, valid values are the ones that can be parsed as Long.  If this parameter is set with token id, then token associated with the payment method is also removed.

### Additional Response Fields

Name	Format	Opt	Example Value	Title	Version	Description
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I-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
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## Process Payment (process-payment)

### Additional Request Fields

Name	Format	Opt	Example Value	Title	Ver.	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 has 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.
I-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.
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. Using this will replace identification mechanism normally 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	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. Parameter can be omitted only with parameters i-t-1-1_3ds-secure-mode and s-t-256-512_encrypted-card-details. This is allowed only for merchant that is PCI enabled.
i-t-1-1_3ds-secure-mode	Integer with value 1 or 2	Yes	1	3D secure mode	3	Integer defining 3D secure operation. This is allowed only for merchant that is PCI enabled.
s-t-256-512_encrypted-card-details	String with length of 256-512 characters.	Yes	FA12...FF	Encrypted card details	3	<PAN>=<MMyyyy> padded with PKCS #1 padding and RSA encrypted and converted to upper case hexadecimal string. This can be used only with parameter i-t-1-1_3ds-secure-mode, which is allowed only for merchant that is PCI enabled.
s-t-1-256_http-accept	String with length of 0,1-256 characters.	Yes	*/*	Http-accept	3	Http-client parameter. Used only in 3D secure mode.
s-t-1-256_http-user-agent	String with length of 0,1-256 characters.	Yes	Mozilla/5.0 (Windows NT 6.1; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/57.0.2987.133 Safari/537.36	Http-user-agent	3	Http-client parameter. Used only in 3D secure mode.
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 or 2.	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. 2) Deferred payment. Only authorization will be done. Value 2 limits payment methods shown to the consumer to only those that support deferred in HPP; but has no special functionality in S2S compared to value 1, as payment method is sent in the payment request anyways.
s-t-1-4_card-security-code	String with length of 1-4 characters.	Yes	123	Card Security Code	3	The card security code. Must not be used unless separately agreed.
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.
i-t-1-1_token-extra-info	Integer with value 0 or 1	Yes	1	Request extra token info	5	Integer defining if extra info (masked pan/ expiration date) should be returned.
i-t-1-1_token-scope	Integer with value 1,2,3	Yes	1	Token scope	5	Integer defining which scope token should belong to 1 = Terminal Group, 2 = Company, 3 = Company Group.
s-t-1-36_service-code	String with length of 1-36 characters.	Yes	service_code	Service Code	5	Value Added Service Code.  Service code is also used for token distribution to acquirer
s-t-1-256_token	String with length of 0 or 1-256 characters.	Yes	100	Token	6	Token that was registered for the card.

s-t-1-1024_dynamic-feedback	String with length of 1-1024 chars.	Yes	s-t-1-6_authorization-number, l-f-1-20_dynamic-reference-number, s-t-1-30_card-type, s-t-1-6_card-expiry-date, s-t-1-4_error-code, 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, s-t-1-256_token-two-way, s-t-1-8_card-product (applies only to specific issuer), i-t-4-4_card-pan-last4, s-t-2-2_account-item-type, i-t-1-1_payment-benefit,  i-t-1-1_consumer-card,  s-t-1-36_card-name,  i-t-1-3_failed-auth-response	Dynamic feedback	5	List of parameters to be added to response if available.
s-f-1-30_payment-method-code	String with length of 1-30 characters.	No	visa	Payment Method	6	String key identifying the payment method used.
s-t-1-2048_payment-token-data	String with length of 1-2048 characters	Yes	fPZHf....S2GhIQ=	Payment token data	5	Payment data dictionary (encrypted payment data), Base64 encoded as a string.
s-t-1-32_payment-token-version	String with length of 1-32 characters	Yes	EC_v1	Payment token version	5	Token version information. Supported only EC_v1
s-t-1-8192_payment-token-signature	String with length of 1-8192 characters	Yes	MIAGCS.....F4wAAAAAAA==	Payment token signature	5	Signature of the payment and header data. The signature includes the signing certificate, its intermediate CA certificate and information about the signing algorithm
s-t-1-512_payment-token-header-ephemeral-pk	String with length of 1-512 characters	Yes	MFkwE....ihpoM9aog==	Payment token header ephemeral PK	5	X.509 encoded key bytes, Base64 encoded as a string.
s-t-1-256_payment-token-header-application-data	String with length of 1-256 characters	Yes	L+t9VafnB....KAhmBqcz0	Payment token header application data	5	SHA-256 hash of the applicationData property of the original PKPaymentRequest object. Hex encoded as string.
s-t-1-256_payment-token-header-pk-hash	String with length of 1-256 characters	Yes	L+t9VafnB....KAhmBqcz0=	Payment token header PK hash	5	SHA-256 hash of X-509 encoded PK of the merchant, Base64 encoded as a string.
s-t-1-256_payment-token-header-transaction-id	String with length of 1-256 characters	Yes	c9bbaca178....ed81fb1a1	Payment token header transaction ID	5	Transaction identifier, generated on the device.
i-t-1-1_partial-approval	Integer with value 0 or 1	Yes	1	Partial Approval	5	Integer defining that payment is allowed to be approved partially. 0=Partial approval not allowed. 1=Partial approval allowed

i-t-1-1_transaction-initiator	Integer with value 1 or 2	Yes	0	Transaction Initiator (Merchant / Cardholder)	3	Integer defining who started the payment:  1=Cardholder Initiated Transaction (e.g. consumer ordering goods with single-click payment with a saved payment method ID by using an application / web site)  2=Merchant Initiated Transaction (e.g. merchant needs to charge for extra costs for example in case of hotel mini bar usage / extra gasoline fees for car rental / other extra costs which the payer has not paid up-front).
s-t-1-2_eci-flag	String with length of 1-2 characters	Yes	01	Electronic Commerce Identifier (for 3-D Secure)		Electronic Commerce Indicator (ECI). The ECI value is part of the 2 data elements that indicate the transaction was processed electronically. This should be passed on the authorization transaction to the Gateway/Processor.  <b>Possible Values:</b>  02 or 05 - Fully Authenticated Transaction  01 or 06 - Attempted Authentication Transaction  00 or 07 - Non 3-D Secure Transaction  <b>Mastercard</b> - 02, 01, 00  <b>VISA</b> - 05, 06, 07  <b>AMEX</b> - 05, 06, 07  <b>JCB</b> - 05, 06, 07  <b>DINERS CLUB</b> - 05, 06, 07
s-t-1-40_cavv	String with length of 1-40 characters	Yes		Cardholder Authentication Verification Value		Cardholder Authentication Verification Value (CAVV)  Authentication Verification Value (AVV)  Universal Cardholder Authentication Field (UCAF)  This value should be appended to the authorization message signifying that the transaction has been successfully authenticated. This value will be encoded according to the Merchant's configuration in either Base64 encoding or Hex encoding. A Base64 encoding Merchant configuration will produce values of 28 or 32 characters. A Hex encoding Merchant configuration will produce values of 40 or 48 characters. The value when decoded will either be 20 bytes for CAVV for 20 or 24 bytes if the value is AAV (Mastercard UCAF)
s-t-1-40_xid	String with length of 1-40 characters	Yes		3-D Secure transaction ID		A unique transaction identifier assigned to a 3-D Secure transaction.  This value will be encoded according to the Merchant's configuration in either Base64 encoding or Hex encoding. A Base64 encoding Merchant configuration will produce values of 28 characters. A Hex encoding Merchant configuration will produce values of 40 characters.
s-t-1-36_ds_transaction-id	String with length of 1-36 characters	Yes		Directory Server transaction ID		Unique transaction identifier assigned by the Directory Server (DS) to identify a single transaction.  <a href="#">Required for Mastercard Identity Check transaction in Authorization</a>
l-t-12-12_card-filing-code	64 bit integer value with 12 numeric characters.	Yes	222333444555	Card filing code (Merchant defined filing code)	5	When merchant agreement allows merchant to override Field 37, card filing code is used in ISO auth and debit message field 37 replacing system generated filing code value (based on time and transaction ID).  If merchant does not provide it, system generated filing code is used as default.  May not be used without separate agreement.

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

s-t-1-30_item-name-<N>	String with length of 1-30 characters.	Yes	Required	Item Name	3	Item name of the Nth basket item.
l-t-1-20_unit-cost-<N>	64 bit signed integer value formatted as a string with 1-20 numeric characters. Must not be present if unit gross cost is used.  Must be filled if unit gross cost is not filled. Must not be filled if it is.	Yes	100	Item Unit Cost	3	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 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.  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.)  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.
l-t-1-20_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	3	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	3	Number of units in the item.
I-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	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>	64 bit signed integer value formatted as a 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	250	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	50	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.
I-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	Gross amount including tax with two decimal precision.
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.
s-t-10-10_token-expiration-date	yyyy-MM-dd	Yes	2010-01-01	Token expiration date	5	Token expiration date
s-t-1-36_token-masked-pan	String with length of 0 or 1-36 characters.	Yes	123456****0000	Masked pan	5	Masked pan used to generate token
s-t-1-6_authorization-number	String with length of 1 to 6 characters.	Yes	123456	Authorization id.	5	A reference provided by the authorizing institution. Only required in response messages and will only be present where the transaction is approved.
I-f-1-20_dynamic-reference-number	Integer value formatted as string with 1-20 numeric characters.	Yes	23452345	Dynamic reference number	5	Dynamic reference number.
s-t-1-30_card-type	String with length of 1 to 30.	Yes	visa	Card type	5	Card type.
s-t-1-6_card-expiry-date	String with length of 1 to 6.	Yes	042015	Expiry date	5	Expiry date of the card in format MMDDYY.
s-t-1-4-error-code	String with length of 1 to 4.	Yes	H002	Error code	5	Error code, generated by Sales Connector (Hxxx) or received from acquirer (Bxxx).

i-t-1-2_card-3ds-auth-status	String with length of 2.	Yes	03	3DS authorization status	5	Status of 3DS authorization.(Note: The value returned is String.)  valid return values are:  0 = Cavv Not Present Or Issuer Did Not Respond With Result Code 1 = Authentication Result Invalid 2 = Validation Failed Authentication 3 = Validation Passed Authentication 4 = Validation Passed Attempt 5 = Validation Failed Attempt (6 = Reserved 5, this is present in enumeration but not in any use) 7 = Not Valited Issuer Not Participating 8 = Validation Failed Attempt Us Card 9 = Validation Success Attempt Us Card 10 = Validation Failed Attempt Us Card Stand In 11 = Validation Success Attempt Us Card Stand In 12 = Validation Passed Info Only No L Shift 13 = Not Validated Attempt No Cavv From Issuer 14 = Not Validated Authentication No Cavv From Issuer 15 = Duplicate Cavv 16 = Not Validated System Error 17 = Not Validated Invalid Data
i-t-1-1_card-3ds-enrollment-status	String with length of 1.	Yes	1	3DS enrollment status	5	Electronic Commerce Indicator (ECI) value is returned by Directory Server to indicate the authentication results of your customer's credit card payment on 3D Secure.
s-f-1-4096_md	String with length of 1 to 4096.	Yes	MD_0_____12302...c3	MD token for 3DS authentication	3	One time token for 3D secure authentication. Used only in 3D secure mode.
s-t-1-8192_pareq	String with length of 1 to 8192.	Yes	eJxdUV...lg	PaReq	3	One time token for 3D secure authentication. Used only in 3D secure mode.
s-t-1-256_3ds-acs-url	String with length of 1 to 256.	Yes	https://3ds-acs.test.modirum.com/mdpayacs/pareq	3DS authentication URL	3	Forward URL for 3D secure authentication. Used only id 3D secure mode.
s-t-1-1_3ds-charge-back	String with length of 1.	Yes	N	3DS charge back	5	3DS charge-back (J= 3DS, N=CVV after attempt to 3DS, P=only CVV).
i-t-1-3_customer-ip-country	String with length of 1 to 3.	Yes	233	Estonia	5	Country code of the customer (resolved from customer ip address).
i-t-1-3_card-issued-country	String with length of 1 to 3.	Yes	40	Austria	5	Code of country which issued the card.
i-t-2-2_card-pan-last2	String of digits with length of 2.	Yes	11	Last two digits on the card	5	Last 2 digits of the card used to make the payment.
i-t-6-6_card-pan-first6	String of digits with length of 6.	Yes	453288	First six digits on the card	5	First 6 digits of the cars used to make the payment.
s-t-1-256_token-two-way	String with length of 1 to 256.	Yes	100	Token	5	Token that was registered for the card that the used.
s-t-1-8_card-product	String with length of 1 to 8.	Yes	debit	Card product	5	Card product type (applied only to specific issuer).
i-t-4-4_card-pan-last4	String with length of 4	yes	1111	Last four digits of the card	5	Last 4 digits of the card (PAN or DPAN) used to make the payment
I-t-1-20_authorized-amount	64 bit signed integer value formatted as a string with 1-20 numeric characters.	Yes	100	Authorised Amount	5	Partially approved transaction amount
i-t-1-1_payment-benefit	integer value either zero or one	Yes	0	SOK Payment Benefit value	5	If the card is having SOK Payment benefit .
s-t-2-2_account-item-type	String value	Yes	L1	Account type	5	Card Account type
i-t-1-1_consumer-card	Integer value	Yes	o / 1	Consumer Card	5	Consumer Card
i-t-1-3_failed-auth-response	Integer value	Yes	112	Failed authorisation response	5	Failed authorisation response

### Complete Payment (complete-3d-secure-payment)

Operation for completing payment in 3D secure mode. This operation is not actual distinct operation, but it merely continues process payment operation that was interrupted because of 3D secure mode. Operation complete payment (complete-payment) is required to be inside the same http session as operation process payment (process-payment), which initiated the payment.

### Additional Request Fields

Name	Format	Opt	Example Value	Title	Version	Description
s-f-1-4096_md	String with length of 1 to 4096.	No	MD_0_____12302.. .c3	MD token for 3DS authentication	3	One time token for 3D secure authentication.
s-f-1-8192_pares	String with length of 1 to 8192.	No	eJzVWNmuo0qy/Z... M=	PaRes token for 3DS authentication	3	One time token for 3D secure authentication.

Notice! Besides conventional request parameters, 'complete-3d-secure-payment' request is required to contain session header from process payment operation. Request 'complete-3d-secure-payment' will only work within same session as process payment operation.

Notice! 3DS authentication related fields MD and Pares are not included in message signature calculation in complete payment operation.

### Additional Response Fields

Operation complete payment has the response parameters of operation process payment (process-payment).

### 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
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	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	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.
i-t-1-1_partial-capture	Integer with value 0 or 1.	Yes	0	Partial capture	3	If true, leaves remaining order and authorization open after capturing with reduced amount.

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	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	100	Gross Amount	3	Gross amount including tax with two decimal precision.

### Process Supplementary (process-supplementary)

Operation for triggering process supplementary.

### Additional Request Fields

Name	Format	Opt	Example Value	Title	Version	Description
I-f-1-20_original-transaction-number	Integer value formatted as string with 1-20 numeric characters.	No	123	Transaction Number	3	The transaction number for which supplementary will be initiated.
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	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	100	Gross Amount	3	The amount for which supplementary authorization will be triggered.

### Additional Response Fields

Name	Format	Opt	Example Value	Title	Version	Description
I-t-1-20_transaction-number	Integer value formatted as string with 1-20 numeric characters.	Yes	123	Transaction Number	3	Transaction number identifying the supplementary payment transaction. Assigned by payment system.
s-t-1-30_payment-method-code	String with length of 1-30 characters.	Yes	visa	Payment Method	3	String key identifying the payment method used.
i-t-1-3_order-currency-code	String with length of 1-3 numeric characters.	Yes	978	Currency Code	3	Numeric ISO 4217 currency code.
I-t-1-20_order-gross-amount	64 bit signed integer value formatted as a string with 1-20 numeric characters.	Yes	100	Gross Amount	3	Gross amount including tax with two decimal precision.

### Refund Payment (refund-payment)

Operation for refunding payments. Refund is supported for Card, Electronic and Invoice 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.	No	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.
I-f-1-20_refund-amount	64 bit signed integer value formatted as a 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.
s-t-1-1024_dynamic-feedback	String with length of 1-1024 chars.	Yes	I-f-1-20_dynamic-reference-number, s-t-1-30_card-type, s-t-1-4_error-code	Dynamic feedback	5	List of parameters to be added to response if available.

I-t-12-12_card-filing-code	64 bit integer value with 12 numeric characters.	Yes	222333444555	Card filing code (Merchant defined filing code)	5	When merchant agreement allows merchant to override Field 37, card filing code is used in ISO auth and debit message field 37 replacing system generated filing code value (based on time and transaction ID).  If merchant does not provide it, system generated filing code is used as default.  May not be used without separate agreement.
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0-50 basket items supported and they are only show to the 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.

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>	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	3	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 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.  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.)  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 done this way, there will be rounding errors unless prices are chosen not to have them, since EURO and other currencies are finitely dividable.
I-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	3	Unit cost including discount and tax with two decimal precision. 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	3	Number of units in the item.
I-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	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>	64 bit signed integer value formatted as a 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	Unique number identifying the payment transaction.
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-1-20_dynamic-reference-number	Integer value formatted as string with 1-20 numeric characters.	Yes	23452345	Dynamic reference number	5	Dynamic reference number.
s-t-1-30_card-type	String with length of 1 to 30.	Yes	visa	Card type	5	Card type.
s-t-1-4-error-code	String with length of 1 to 4.	Yes	H002	Error code	5	Error code, generated by Sales Connector (Hxxx) or received from acquirer (Bxxx).

#### Refund Amount (refund-amount)

Operation for refunding amounts like lottery wins in special cases. Must not and cannot be used without separate agreement with Verifone.

## Additional Request Fields

Name	Format	Opt	Example Value	Title	Version	Description
I-f-1-20_saved-payment-method-id	64 bit signed integer value formatted as a string with 1-20 numeric characters.	Yes	123	Saved Payment Method ID	5	ID of the saved payment method.
s-t-256-512_encrypte d-card-details	String with length of 256-512 characters.	Yes	FA12...FF	Encrypte d Card Details	6	<PAN>=<MMyyyy> padded with PKCS #1 padding and RSA encrypted and converted to upper case hexadecimal string.
s-t-1-256_token	String with length of 0 or 1-256 characters.	Yes	100	Token	6	Token that was registered for the card that the used.
s-f-1-30_payment-method-code	String with length of 1-30 characters.	No	visa	Payment Method	5	The payment method code.
i-f-1-3_refund-currency-code	String with length of 1-3 numeric characters.	No	978	Currency Code	5	Numeric ISO 4217 currency code.
I-f-1-20_refund-amount	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	100	Refund Amount	5	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	5	Custom parameter reserved for shop system to use.
s-t-1-1024_dynami c-feedback	String with length of 1-1024 chars.	Yes	I-f-1-20_dynamic-reference-number, s-t-1-30_card-type, s-t-1-4_error-code, s-t-1-256_token-two-way	Dynamic feedback	5	List of parameters to be added to response if available.

## 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-1-20_dynamic-reference-number	Integer value formatted as string with 1-20 numeric characters.	Yes	23452345	Dynamic reference number	5	Dynamic reference number.
s-t-1-30_card-type	String with length of 1 to 30.	Yes	visa	Card type	5	Card type.
s-t-1-4-error-code	String with length of 1 to 4.	Yes	H002	Error code	5	Error code, generated by Sales Connector (Hxxx) or received from acquirer (Bxxx).
s-t-1-256_token-two-way	String with length of 1 to 256.	Yes	100	Token	5	Token that was registered for the card that the 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.
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.

## Additional Response Fields

Name	Format	Opt	Example Value	Title	Version	Description
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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	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	100	Gross Amount	3	Gross amount including tax with two decimal precision.
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	Verifone 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
authorized	InvoicePayment has been authorized
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

## 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
l-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. Must not and cannot be used without separate agreement with Verifone.

### 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 /Customer id	3	Identifier of the buyer assigned by web shop. If this is given, the other fields are not used in determining the buyer.  Information is also stored as part of a token, if token is created and returned for token use cases so that the token's owner can be mapped in calling systems (e.g. with get-token).
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>=<MMyyyy> 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.
i-t-1-1_token-scope	Integer with value 1,2,3	Yes	1	Token scope	5	Integer defining which scope token should belong to 1 = Terminal Group, 2 = Company, 3 = Company Group
i-t-1-1_token-extra-info	Integer with value 0 or 1	Yes	1	Request extra token info	5	Integer defining if extra info (masked pan/ expiration date) should be returned.
s-t-1-36_service-code	String with length of 1-36 characters.	Yes	service_code	Service Code	5	Value Added Service Code.  Service code is also used for token distribution to acquirer
s-t-1-256_token	String with length of 1-256 characters.	Yes	1234567890	Token	5	The token that was generated by Verifone. Although the type is String, valid values are the ones that can be parsed as Long.

### 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.
i-t-1-20_payment-method-id	64 bit signed integer value formatted as a 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.
s-t-10-10_token-expiration-date	yyyy-MM-dd	Yes	2010-01-01	Token expiration date	5	Token expiration date
s-t-1-36_token-masked-pan	String with length of 0 or 1-36 characters.	Yes	123456*****0000	Masked pan	5	Masked pan used to generate token

### Save Token (save-token)

Operation for saving a token for a card or mobile app id.

### Additional Request Fields

Name	Format	Opt	Example Value	Title	Version	Description
s-t-1-30_payment-method-code	String with length of 1-30 characters.	Yes	visa	Payment Method	5	The payment method code.  Payment method code will not be present when saving a token for mobile app id.  This parameter is optional and partially obsolete as long as Verifone has configured a token terminal configuration for the merchant agreement.
s-f-256-512_encrypt-ed-card-details	String with length of 256-512 characters.	Yes	FA12...FF	Encrypted card details	5	<PAN>=<MMyyyy> padded with PKCS #1 padding and RSA encrypted and converted to upper case hexadecimal string.  <b>Note!</b> Either this parameter or s-t-1-255_app-id must be present but never both. The selection depends on whether a card payment method is tokenized or a non-card method is tokenized (e.g. a unique application id or other value).

s-t-1-36_service-code	String with length of 1-36 characters.	Yes	service_code	Service Code	5	Value Added Service Code
i-t-1-1_token-scope	Integer with value 1,2,3	Yes	1	Token scope	5	Integer defining which scope token should belong to 1 = Terminal Group, 2 = Compan, 3 = Company Group
i-t-1-1_token-extra-info	Integer with value 0 or 1	Yes	1	Request extra token info	5	Integer defining if extra info (masked pan/ expiration date) should be returned.
s-t-1-255_app-id	String with length of 1-255 characters	Yes	appid-123e4567-e89b-12d3-a456-426655440000	Mobile App Id	5	Mobile App Id for mobile installation.  Note! Either this parameter or s-f-256-512_encrypted-card-details must be present but never both. The selection depends on whether a card payment method is tokenized or a non-card method is tokenized (e.g. a unique application id or other value).
s-t-1-255_buyer-external-id	String with length of 1-255 characters.	Yes	213123123	Buyer External Identifier /Customer id	5	Identifier of the buyer / token owner. Information is stored as part of a token, if token is created and returned for token use cases so that the token's owner can be mapped in calling systems (e.g. with get-token).
s-t-1-256_token	tring with length of 0 or 1-256 characters	Yes	1234567890	Token /Token Id	6	The token that was generated by Verifone. Although the type is String, valid values are the ones that can be parsed as Long. Token that was registered for the card. Customer Id( s-t-1-255_buyer-external-id) can be updated by using the token.
i-t-1-1_token-type-identifier	Integer with value 1.	Yes	1	Token Type Identifier	5	Integer defining that save token  1) BANK Acept

#### 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.
s-t-10-10_token-expiration-date	yyyy-MM-dd	Yes	2010-01-01	Token expiration date	5	Token expiration date
s-t-1-36_token-masked-pan	String with length of 0 or 1-36 characters.	Yes	123456*****0000	Masked pan	5	Masked pan used to generate token
s-t-1-255_app-id	String with length of 1-255 characters	Yes	appid-123e4567-e89b-12d3-a456-426655440000	Mobile App Id	5	Mobile App Id for mobile installation.  <b>Note!</b> Either parameter s-t-1-36_token-masked-pan or s-t-1-255_app-id will be present in the response depending on whether a card payment method is tokenized or a non-card method is tokenized.
s-t-1-36_token-masked-bank-account	String with length of 0 or 1-36 characters.	Yes	*****1234	Masked Bank Account	5	Masked Bank Account used to generate token

#### Get Token (get-token)

Operation for getting an existing token associated to a card or mobile app id.

#### Additional Request Fields

Name	Format	Opt	Example Value	Title	Version	Description
s-t-1-30_payment-method-code	String with length of 1-30 characters.	Yes	visa	Payment Method	5	The payment method code.  Payment method code will not be present when getting a token for mobile app id.

s-t-256-512_encrypt-ed-card-details	String with length of 256-512 characters.	Yes	FA12...FF	Encrypted card details	5	<PAN>=<MM/yyyy> padded with PKCS #1 padding and RSA encrypted and converted to upper case hexadecimal string.  <b>Note!</b> Either this parameter or s-t-1-255_app-id must be present but never both. The selection depends on whether a card payment method is tokenized or a non-card method is tokenized (e.g. a unique application id or other value).
s-t-1-36_service-code	String with length of 1-36 characters.	Yes	service_code	Service Code	5	Value Added Service Code
i-t-1-1_token-scope	Integer with value 1,2,3	Yes	1	Token scope	5	Integer defining which scope token should belong to 1 = Terminal Group, 2 = Company, 3 = Company Group
i-t-1-1_token-extra-info	Integer with value 0 or 1	Yes	1	Request extra token info	5	Integer defining if extra info (masked pan/ expiration date) should be returned.
s-t-1-255_app-id	String with length of 1-255 characters	Yes	appid-123e4567-e89b-12d3-a456-426655440000	Mobile App Id	5	Mobile App Id for mobile installation.  <b>Note!</b> Either this parameter or s-f-256-512_encrypted-card-details must be present but never both. The selection depends on whether a card payment method is tokenized or a non-card method is tokenized (e.g. a unique application id or other value).
i-t-1-1_token-type-identifier	Integer with value 1.	Yes	1	Token Type Identifier	5	Integer defining that save token 1) BANK Acept

#### 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.
s-t-10-10_token-expiration-date	yyyy-MM-dd	Yes	2010-01-01	Token expiration date	5	Token expiration date
s-t-1-36_token-masked-pan	String with length of 0 or 1-36 characters.	Yes	123456*****0000	Masked pan	5	Masked pan used to generate token
s-t-1-255_app-id	String with length of 1-255 characters	Yes	appid-123e4567-e89b-12d3-a456-426655440000	Mobile App Id	5	Mobile App Id for mobile installation.  <b>Note!</b> Either parameter s-t-1-36_token-masked-pan or s-t-1-255_app-id will be present in the response depending on whether a card payment method is tokenized or a non-card method is tokenized.
s-t-1-255_buyer-external-id	String with length of 1-255 characters.	Yes	213123123	Buyer External Identifier /Customer id	5	Identifier of the buyer / token owner. Information is stored as part of a token and returned if value has been provided when the token has been created.
s-t-1-36_token-masked-bank-account	String with length of 0 or 1-36 characters.	Yes	*****1234	Masked Bank Account	5	Masked Bank Account used to generate token

#### Delete Token (delete-token)

Operation for Deleting an existing token associated to a card or mobile app id.

#### Additional Request Fields

Name	Format	Opt	Example Value	Title	Version	Description
s-t-1-30_payment-method-code	String with length of 1-30 characters.	Yes	visa	Payment Method	5	The payment method code.  Payment method code will not be present when deleting a token for mobile app id.

s-f-1-256_token	String with length of 1-256 characters.	No	1234567890	Token	5	The token that was generated by Verifone. Although 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.
i-t-1-1_token-scope	Integer with value 1,2,3	Yes	1	Token scope	5	Integer defining which scope token should belong to 1 = Terminal Group, 2 = Company, 3 = Company Group

#### Additional Response Fields

Name	Format	Opt	Example Value	Title	Version	Description
I-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_FL		5	The language locale used by buyer.
t-f-14-19_order-expiry-timestamp	yyyy-MM-dd HH:mm:ss	No	2010-01-03 01:01:32	Order expiration timestamp	5	UTC timestamp defining when the payment link expires.
s-f-1-36_order-number	String with length of 1-36 characters.	No	123	Order Number	5	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	5	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	5	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	5	Numeric ISO 4217 currency code.
I-f-1-20_order-gross-amount	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	100	Gross Amount	5	Total amount including taxes and discount with two decimal precision. Example value corresponds to 1 EUR.
I-f-1-20_order-net-amount	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	200	Net Amount	5	Order net amount without discount or taxes.
I-f-1-20_order-vat-amount	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	100	Vat amount	5	Order VAT amount
s-t-1-30_payment-method-code	String with length of 1-30 characters.	Yes	visa	Payment Method	5	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-first-name	String with length of 1-30 characters.	No	John	First Name	5	First name of the buyer.
s-f-1-30_buyer-last-name	String with length of 1-30 characters.	No	Smith	Last Name	5	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	5	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	5	Email address of the buyer.
s-t-1-255_buyer-external-id	String with length of 1-255 characters.	Yes	213123123	Buyer External Identifier	5	Identifier of the buyer assigned by web shop. Not recommended to be used. Using this will replace identification mechanism normally 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	5	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	5	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	5	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	5	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	5	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	5	Numeric ISO 3166 country code of the delivery address.
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	5	ID of the saved payment method.
i-t-1-1_deferred-payment	Integer with value 0 or 1 or 2.	Yes	1	Deferred Payment	5	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. 2) Deferred payment. Only authorization will be done.
s-t-1-160_additional-delivery-text	String with length 1-160	Yes	Link has been generated	Additional delivery text	5	Text included in link email or SMS
s-t-1-128_sender-email	String with length 1-128	Yes	noreply@merchant.com	Sender email	5	Email that will show as sender for the link email.
s-t-1-36_payment-link-number	String with length of 1-36 characters.	No	1234567890	Payment link Number	5	If payment-link-number is provided, the system will update an existing link and not create a new one. A new, updated email will be sent to the buyer email address.
l-t-12-12_card-filing-code	64 bit integer value with 12 numeric characters.	Yes	222333444555	Card filing code (Merchant defined filing code)	5	When merchant agreement allows merchant to override Field 37, card filing code is used in ISO auth and debit message field 37 replacing system generated filing code value (based on time and transaction ID).  If merchant does not provide it, system generated filing code is used as default.  May not be used without separate agreement.

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.
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I-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	3	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 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.  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.)  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 done this way, there will be rounding errors unless prices are chosen not to have them, since EURO and other currencies are finitely dividable.
I-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	3	Unit cost including discount and tax with two decimal precision. 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	3	Number of units in the item.
I-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	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>	64 bit signed integer value formatted as a 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
s-t-1-36_payment-link-number	String with length of 1-36 characters.	Yes	1234567890	Payment link Number	5	Returns the created payment-link-number back. Can be used to update the link if necessary.

#### Get Payment Link Status (get-payment-link-status)

Operation for getting payment status.

#### Additional Request Fields

Name	Format	Opt	Example Value	Title	Version	Description
s-t-1-36_payment-link-number	String with length of 1-36 characters.	No	1234567890	Payment link number	5	Payment link number

#### Additional Response Fields

Name	Format	Opt	Example Value	Title	Version	Description
s-t-1-36_payment-link-number	String with length of 1-36 characters.	No	1234567890	Payment link Number	5	Payment link number, echoing from request.
s-t-1-36_payment-link-status	String with length of 1-36 characters.	No	Payment status could be from below- <ul style="list-style-type: none"> <li>new</li> <li>used</li> <li>expired</li> <li>canceled</li> </ul>	Payment link status	5	Current status of payment link
t-f-14-19_order-expiry-timestamp	yyyy-MM-dd HH:mm:ss	Yes	2010-01-01 01:01:32	Order expiry	5	Payment link expiry, present only if status is EXPIRED or NEW
t-f-14-19_payment-timestamp	yyyy-MM-dd HH:mm:ss	Yes	2010-01-01 01:01:32	Payment timestamp	5	Payment timestamp when link was used or canceled, present only with status USED or CANCELED

## Reactivate Payment Link (reactivate-payment-link)

Operation for reactivating a payment link or changing the expiry date. Note that this will send an email to the buyer. You can use this with history date to deactivate a payment link.

### Additional Request Fields

Name	Format	Opt	Example Value	Title	Version	Description
s-t-1-36_payment-link-number	String with length of 1-36 characters.	No	1234567890	Payment link number	5	Payment link number
t-f-14-19_order-expiry-timestamp	yyyy-MM-dd HH:mm:ss	No	2010-01-01 01:01:32	Order expiration time stamp	5	Order expiration timestamp

### Additional Response Fields

Name	Format	Opt	Example Value	Title	Version	Description
s-t-1-36_payment-link-number	String with length of 1-36 characters.	No	1234567890	Payment link Number	5	Payment link number, echoing from request.

## Swish payment (create-payment-request)

Operation for swish payment.

### Additional Request Fields

Name	Format	Opt	Example Value	Title	Version	Description
i-f-1-3_order-currency-code	String with length of 1-3 numeric characters.	No	752	Currency Code	5	Numeric ISO 4217 currency code.
i-t-1-3_delivery-address-country-code	String with length of 0,1-3 characters.	Yes	246	Delivery Address Country Code	5	Numeric ISO 3166 country code of the delivery address.
l-f-1-20_order-gross-amount	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	1230	Gross Amount	5	Gross amount including tax with two decimal precision.
s-f-5-256_callback-url	String with length of 5 to 256.	No	https://	Call Back URL	5	Call back url of the Webshop, to get notification of the outcome of the payment request. It only supports https.
locale-f-2-5_payment-locale	String with length of 2-5 characters.	No	fi_FI	Locale	5	The language locale used by buyer.
s-f-1-100_buyer-email-address	String with length of 1-100 characters.	No	john.smith@gmail.com	Email Address	5	Email address of the buyer.
s-f-1-30_buyer-first-name	String with length of 1-30 characters.	No	John	First Name	5	First name of the buyer.
s-f-1-30_buyer-last-name	String with length of 1-30 characters.	No	Smith	Last Name	5	Last name of the buyer.
s-f-1-30_payment-method-code	String with length of 1-30 characters.	No	swish	Payment Method	5	String key identifying the payment method used.
s-f-1-36_order-number	String with length of 1-36 characters.	No	123	Order Number	5	Textual order number assigned by shop system. Valid characters are a-z, A-Z, 0-9 and minus sign.
s-t-1-255_buyer-external-id	String with length of 1-255 characters.	Yes	6633	Buyer External Identifier	5	Identifier of the buyer assigned by web shop. Not recommended to be used. Using this will be replace identification mechanism normally based on other mandatory user details.
s-t-1-30_buyer-phone-number	String with length of 0,1-30 characters.	Yes	358401639099	Phone Number	5	Phone number of the buyer.
s-t-1-30_delivery-address-city	String with length of 0,1-30 characters.	Yes	Helsinki	Delivery Address City	5	City of the delivery address.
s-t-1-30_delivery-address-line-one	String with length of 0,1-30 characters.	Yes	Street 31	Delivery Address Line #1	5	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	5	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	5	Line three of the delivery address.
s-t-1-36_order-note	String with length of 0 or 1-36 characters.	Yes	Example note.	Order Note	5	Custom parameter reserved for shop system to use.
t-f-14-19_order-timestamp	yyyy-MM-dd HH:mm:ss	No	2010-01-01 01:01:32	Order Timestamp	5	UTC timestamp defining the orders time from web shop point of view.
t-f-14-19_payment-timestamp	yyyy-MM-dd HH:mm:ss	No	2010-01-01 01:01:32	Payment Timestamp	5	UTC timestamp defining the payment start time from web shop point of view. If payment is retried then payment timestamp has to differ from first payment for same order.

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	Example	Item Name	3	Item name of the Nth basket item.
I-t-1-20_bi-unit-cost-<N>	64 bit signed integer value formatted as a string with 1-20 numeric characters. Must not be present if unit gross cost is used.  Must be filled if unit gross cost is not filled. Must not be filled if it is.	Yes	1000	Item Unit Cost	3	Unit cost with two decimal precision but without discount and tax. Example value corresponds to 10 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 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.  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.)  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.
I-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	3	Unit cost including discount and tax with two decimal precision. Example value corresponds 1 EUR , 24% vat and 0% discount.
i-t-1-4_bi-vat-percentage	Integer formatted as string with 0,1-4 numeric characters	Yes	2300	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-1-11_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>	64 bit signed integer value formatted as a string with 1-20 numeric characters.	Yes	1230	Item Gross Amount	3	Item gross amount including tax and discount with two decimal precision. Example value corresponds to 10 EUR with 23% VAT, 0% discount.
I-t-1-20_bi-net-amount-<N>	64 bit signed integer value formatted as a string with 1-20 numeric characters.	Yes	1000	Item Net Amount	3	Item net amount calculated from unit cost times unit count with two decimal precision. Example value corresponds to 10 EUR.
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	821613	Transaction Number	3	Unique number from identifying the payment transaction.
s-t-1-10_payment-request-result	String with length of 1-10 characters.	No	Created	Payment Result Code	3	Code identifying status/result of the payment transaction.

### Payment Request Result

create-payment-request API Response Result Codes



Status Code	Description
Created	The payment is successfully initiated
Failed	The payment is failed

### Swish payment (Callback response field)

Note! Callback will only be sent if create-payment-request returns s-t-1-10\_payment-request-result with value Created.

#### Callback Response Fields

Name	Format	Opt	Example value	Title	Version	Description
i-f-1-11_interface-version	String with length of 1-10 characters.	No	1	Interface Version	3	Version of the payment interface.
l-f-1-20_transaction-number	Integer value formatted as string with 1-20 numeric characters.	No	821613	Transaction Number	3	Unique number from identifying the payment transaction.
s-t-1-10_payment-request-result	String with length of 1-10 characters.	No	PAID	Payment Result Code	3	Code defines the status/result of the transaction during callback.
s-f-1-10_software-version	String with length of 1-10 characters.	NO	1.0.1	Version	5	Version of the payment system.
s-f-1-30_payment-method-code	String with length of 1-30 characters.	No	swish	Payment Method	5	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 0 or 1-36 characters.	Yes	Example note.	Order Note	3	Custom parameter reserved for shop system to use.
t-f-14-19_order-timestamp	yyyy-MM-dd HH:mm:ss	No	2018-06-11 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	752	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	Gross amount including tax with two decimal
s-t-256-256_signature-two	String with length of 512 characters.	Yes	fa12...ff	Signature Two	3	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-one	String with length of 512 characters.	Yes	fa12...ff	Signature One	3	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 Request Result

##### Callback Response Result Codes

Status Code	Description
PAID	The payment was successful
DECLINED	The payer declined to make the payment
ERROR	Payment failed at PSP/verifone for Some error occurred, like payment request timed out from 3rd party (Swish Handler, Siirto ..)
FAILED	Payment failed at the payment service

#### Get Token Info (get-token-info)

## Get Token Info Request Fields

Name	Format	Opt	Example value	Title	Version	Description
s-t-1-30_payment-method-code	String with length of 1-30 characters.	Yes	visa	Payment Method	5	The payment method code. Payment method code will not be present when getting a token for mobile app id.
s-f-256-512_encrypted-card-details	String with length of 256-512 characters.	Yes	FA12...FF	Encrypted card details	5	<PAN>=<MMYYYY> padded with PKCS #1 padding and RSA encrypted and converted to upper case hexadecimal string.  <b>Note!</b> Either this parameter or s-t-1-255_app-id must be present but never both. The selection depends on whether a card payment method is tokenized or a non-card method is tokenized (e.g. a unique application id or other value).
s-t-1-36_service-code	String with length of 1-36 characters.	Yes	service_code	Service Code	5	Value Added Service Code
i-t-1-1_token-scope	Integer with value 1,2,3	Yes	1	Token scope	5	Integer defining which scope token should belong to 1 = Terminal Group, 2 = Company, 3 = Company Group
i-t-1-1_token-extra-info	Integer with value 0 or 1	Yes	1	Request extra token info	5	Integer defining if extra info (masked pan/ expiration date) should be returned.
s-f-1-256_token	String with length of 1-256 characters.	No	1234567890	Token	5	Token that was registered for the card or for account number that was send.

## Get Token Info Response Fields

Name	Format	Opt	Example Value	Title	Version	Description
s-t-1-256_token	String with length of 1-256 characters.	Yes	1234567890	Token	5	Token that was registered for the card or for account number that was send.
s-t-10-10_token-expiration-date	yyyy-MM-dd	Yes	2010-01-01	Token expiration date	5	Token expiration date
s-t-1-36_token-masked-pan	String with length of 0 or 1-36 characters.	Yes	123456*****0000	Masked pan	5	Masked pan used to generate token
s-t-1-255_app-id	String with length of 1-255 characters	Yes	appid-123e4567-e89b-12d3-a456-426655440000	Mobile App Id	5	Mobile App Id for mobile installation.  <b>Note!</b> Either parameter s-t-1-36_token-masked-pan or s-t-1-255_app-id will be present in the response depending on whether a card payment method is tokenized or a non-card method is tokenized.
s-t-1-255_buyer-external-id	String with length of 1-255 characters.	Yes	213123123	Buyer External Identifier /Customer id	5	Identifier of the buyer / token owner. Information is stored as part of a token and returned if value has been provided when the token has been created.
s-t-1-36_token-masked-bank-account	String with length of 0 or 1-36 characters.	Yes	*****1234	Masked Bank Account	5	Masked Bank Account used to generate token

## Get sub payment methods (get-sub-payment-methods)

Used to fetch AfterPay invoice payment method types (invoice, instalment, etc). Buyer can pick AfterPay payment option at the webshop, and webshop can relay the corresponding i-t-1-4\_sub-payment-method-profile-number in the payment request.

Requires AfterPay payment method enabled on the merchant-agreement-code used.

## Additional Request Fields

Name	Format	Opt	Example Value	Title	Version	Description
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s-f-1-30_payment-method-code	String with length of 1-30 characters.	No	afterpay-invoice	Payment Method		The payment method code. Value can be found in Appendix (please see the end of this document).
locale-f-2-5_payment-locale	String with length of 2-5 characters.	No	fi_FI			The language locale used by buyer.
i-f-1-3_order-currency-code	String with length of 1-3 numeric characters.	No	978	Currency Code		Numeric ISO 4217 currency code.
I-f-1-20_order-gross-amount	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	100	Gross Amount		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.	Yes	John	First Name		First name of the buyer.
s-f-1-30_buyer-last-name	String with length of 1-30 characters.	Yes	Smith	Last Name		Last name of the buyer.
s-f-1-100_buyer-email-address	String with length of 1-100 characters.	Yes	john.smith@gmail.com	Email Address		Email address of the buyer.
s-t-1-30_buyer-phone-number	String with length of 0,1-30 characters.	Yes	+358 40 234234	Phone Number		Phone number of the buyer.
s-t-1-30_delivery-address-line-one	String with length of 0,1-30 characters.	Yes	Street 31	Delivery Address Line #1		Line one of the delivery address
s-t-1-30_delivery-address-city	String with length of 0,1-30 characters.	Yes	Helsinki	Delivery Address City		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		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		Numeric ISO 3166 country code of the delivery address.

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.	No	Red Apple	Item Name	Item name of the Nth basket item.
i-t-1-11_bi-unit-count-<N>	Integer value formatted as string with 1-11 numeric characters.	No	1	Item Unit Count	Number of units in the item.
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 precision. Example value corresponds to 5,5%. Currently, cannot be an empty string nor missing.
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 precision. Example value corresponds to 22,5%. Currently, cannot be an empty string nor missing.
I-t-1-20_bi-gross-amount-<N>	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	123	Item Gross Amount	Item gross amount including tax and discount with two decimal precision. Example value corresponds to 1,23 EUR.
I-t-1-20_bi-net-amount-<N>	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	100	Item Net Amount	Item net amount calculated from unit cost times unit count with two decimal precision. Example value corresponds to 1 EUR.

I-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 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.  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.)  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 o have them, since EURO and other currencies are finitely dividable.
I-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	123	Item Unit Gross Cost	Unit cost with two decimal precision, with discount and tax. Example value corresponds 1 EUR , 23% vat and 0% discount.

#### Additional Response Fields

Name	Format	Opt	Example Value	Title	Version	Description
s-t-1-30_sub-payment-method-type-<N>	String with length of 1-30 characters.	No	Invoice	Sub Payment Method Type		Sub payment method type/name as string. Other possible types could be Account, Installment...
i-t-1-4_sub-payment-method-profile-number-<N>	Integer value formatted as string with 1-4 numeric characters.	Yes	3	Sub Payment Method Profile Number		Sub payment method profile number as integer, this is sent to acquirer when doing the actual payment.
I-t-1-20_sub-payment-method-basket-amount-<N>	64 bit signed integer value formatted as a string with 1-20 numeric characters.	Yes	1023	Sub Payment Method Basket Amount		Order gross amount including tax and discount with two decimal precision. Example value corresponds to 10,23 EUR.
I-t-1-20_sub-payment-method-installment-amount-<N>	64 bit signed integer value formatted as a string with 1-20 numeric characters.	Yes	555	Sub Payment Method Installment Amount		Monthly installment amount with two decimal precision. Example value corresponds to 5,55 EUR.
i-f-1-4_sub-payment-method-interest-rate-<N>	Integer value formatted as string with 1-4 numeric characters.	Yes	1950	Sub Payment Method Interest Rate		Interest rate with two decimal precision. Example value corresponds to 19,50 %.
I-t-1-20_sub-payment-method-monthly-fee-<N>	64 bit signed integer value formatted as a string with 1-20 numeric characters.	Yes	230	Sub Payment Method Monthly Fee		Monthly fee amount with two decimal precision. Example value corresponds to 2,30 EUR.
i-t-1-4_sub-payment-method-number-of-installments-<N>	Integer value formatted as string with 1-4 numeric characters.	Yes	2	Sub Payment Method Number of Installments		Number of installments.
I-t-1-20_sub-payment-method-startup-fee-<N>	64 bit signed integer value formatted as a string with 1-20 numeric characters.	Yes	340	Sub Payment Method Startup Fee		Payment startup fee amount with two decimal precision. Example value corresponds to 3,40 EUR.

#### Error Messages

Name	Message	Description
Connection failed	failed-contact-thirdparty	Connection or request failed internally
General 3rd party error	thirdparty-services-error	General error in 3rd party service. Can also also be connection problem to 3rd party service.
Invalid request	thirdparty-error-request	Invalid request to 3rd party service, error code received.
Invalid request parameters	thirdparty-error-parameters	Invalid request parameters to 3rd party service, error code received.
Invalid customer	thirdparty-invalid-customer	Invalid customer or address information, 3rd party service returned error code.

### Get Buyer Details (get-buyer-details)

Returns customer address information from AfterPay. Requires merchant-agreement-code to have AfterPay payment method enabled.

#### 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	afterpay-invoice	Payment Method		The payment method code. Value can be found in Appendix (please see the end of this document).
s-t-0-13_lookup-social-security-number	String with length of 1-30 characters.	Yes, but mandatory in Finland and Sweden.	311063-998H	Lookup Social Security Number		Social security number of the buyer.
s-t-1-30_delivery-address-postal-code	String with length of 1-30 characters.	Yes, but mandatory in Finland.	62300	Delivery Address Postal Code		Postal code of the delivery address.
s-t-1-30_buyer-phone-number	String with length of 1-30 characters.	Yes, but mandatory in Norway.	+358 40 234234	Phone Number		Phone number of the buyer.

#### Additional Response Fields

Name	Format	Opt	Example Value	Title	Version	Description
s-t-1-30_buyer-first-name	String with length of 1-30 characters.	Yes	John	First Name		First name of the buyer.
s-t-1-30_buyer-last-name	String with length of 1-30 characters.	Yes	Smith	Last Name		Last name of the buyer.
s-t-1-30_delivery-address-line-one	String with length of 1-30 characters.	Yes	Street 31	Delivery Address Line #1		Line one of the delivery address.
s-t-1-30_delivery-address-postal-code	String with length of 1-30 characters.	Yes	00270	Delivery Address Postal Code		Postal code of the delivery address.
s-t-1-30_delivery-address-city	String with length of 1-30 characters.	Yes	Helsinki	Delivery Address City		City of the delivery address.
s-t-0-128_delivery-address-country	String with length of 1-128 characters.	Yes	Finland	Delivery Address Country		Country 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		Numeric ISO 3166 country code of the delivery address.

s-f-1-100_buyer-email-address	String with length of 1-100 characters.	Yes	john.smith@gmail.com	Email Address		Email address of the buyer.
s-t-1-30_buyer-phone-number	String with length of 1-30 characters.	Yes	+358 40 234234234	Phone Number		Phone number of the buyer.

### Process Invoice Payment (process-invoice-payment)

Returns customer address information from AfterPay. Requires merchant-agreement-code to have AfterPay payment method enabled.

#### 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	afterpay-invoice	Payment Method		The payment method code. Value can be found in Appendix (please see the end of this document).
s-t-0-13_lookup-social-security-number	String with length of 1-30 characters.	Yes, but mandatory in Finland and Sweden.	311063-998H	Lookup Social Security Number		Social security number of the buyer.
s-t-1-30_delivery-address-postal-code	String with length of 1-30 characters.	Yes, but mandatory in Finland.	62300	Delivery Address Postal Code		Postal code of the delivery address.
s-t-1-30_buyer-phone-number	String with length of 1-30 characters.	Yes, but mandatory in Norway.	+358 40 234234	Phone Number		Phone number of the buyer.
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		Order VAT amount
l-f-1-20_order-net-amount	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	200	Net Amount		Order net amount without discount or taxes.
i-t-1-4_order-vat-percentage	Integer formatted as string with 0,1-4 numeric characters	Yes	2250	VAT Percentage		Value added tax with two decimal precision. Example value corresponds to 22,5%. Can be empty if multiple VAT percentages are used in order.

#### Additional Response Fields

Name	Format	Opt	Example Value	Title	Version	Description
s-t-1-30_buyer-first-name	String with length of 1-30 characters.	Yes	John	First Name		First name of the buyer.
s-t-1-30_buyer-last-name	String with length of 1-30 characters.	Yes	Smith	Last Name		Last name of the buyer.
s-t-1-30_delivery-address-line-one	String with length of 1-30 characters.	Yes	Street 31	Delivery Address Line #1		Line one of the delivery address.
s-t-1-30_delivery-address-postal-code	String with length of 1-30 characters.	Yes	00270	Delivery Address Postal Code		Postal code of the delivery address.
s-t-1-30_delivery-address-city	String with length of 1-30 characters.	Yes	Helsinki	Delivery Address City		City of the delivery address.

s-t-0-128_delivery-address-country	String with length of 1-128 characters.	Yes	Finland	Delivery Address Country		Country 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		Numeric ISO 3166 country code of the delivery address.
s-f-1-100_buyer-email-address	String with length of 1-100 characters.	Yes	john.smith@gmail.com	Email Address		Email address of the buyer.
s-t-1-30_buyer-phone-number	String with length of 1-30 characters.	Yes	+358 40 234234234	Phone Number		Phone number of the buyer.

#### Error Messages

Name	Message	Description
Connection failed	failed-contact-thirdparty	Connection or request failed internally
General 3rd party error	thirdparty-services-error	General error in 3rd party service. Can also also be connection problem to 3rd party service.
Invalid request	thirdparty-error-request	Invalid request to 3rd party service, error code received.
Invalid request parameters	thirdparty-error-parameters	Invalid request parameters to 3rd party service, error code received.
Customer not found	thirdparty-customer-not-found	Customer details not found from 3rd party service, error code received.
Invalid customer	thirdparty-invalid-customer	Invalid customer or address information, 3rd party service returned error code.

#### Afterpay Invoice payment (process-invoice-payment)

##### Additional Request Fields

Name	Format	Opt	Example Value	Title	Version	Description
i-f-1-3_order-currency-code	String with length of 1-3 numeric characters.	No	752	Currency Code	5	Numeric ISO 4217 currency code.
i-t-1-3_delivery-address-country-code	String with length of 0,1-3 characters.	No	246	Delivery Address Country Code	5	Numeric ISO 3166 country code of the delivery address.
l-f-1-20_order-gross-amount	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	1230	Gross Amount	5	Gross amount including tax with two decimal precision.
s-t-1-2048_image-url	String with length of 5 to 256.	No	https://	ImageURL	5	Used to display logo
locale-f-2-5_payment-locale	String with length of 2-5 characters.	No	fi_FI	Locale	5	The language locale used by buyer.
s-f-1-100_buyer-email-address	String with length of 1-100 characters.	No	john.smith@gmail.com	Email Address	5	Email address of the buyer.
s-f-1-30_buyer-first-name	String with length of 1-30 characters.	No	John	First Name	5	First name of the buyer.
s-f-1-30_buyer-last-name	String with length of 1-30 characters.	No	Smith	Last Name	5	Last name of the buyer.
s-f-1-30_payment-method-code	String with length of 1-30 characters.	No	swish	Payment Method	5	String key identifying the payment method used.
s-f-1-36_order-number	String with length of 1-36 characters.	No	123	Order Number	5	Textual order number assigned by shop system. Valid characters are a-z, A-Z, 0-9 and minus sign.

s-t-1-255_buyer-external-id	String with length of 1-255 characters.	Yes	6633	Buyer External Identifier	5	Identifier of the buyer assigned by web shop. Not recommended to be used. Using this will be replace identification mechanism normally based on other mandatory user details.
s-t-1-30_buyer-phone-number	String with length of 0,1-30 characters.	No	358401639099	Phone Number	5	Phone number of the buyer.
s-t-1-30_delivery-address-city	String with length of 0,1-30 characters.	No	Helsinki	Delivery Address City	5	City of the delivery address.
s-t-1-30_delivery-address-line-one	String with length of 0,1-30 characters.	No	Street 31	Delivery Address Line #1	5	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	5	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	5	Line three of the delivery address.
s-t-1-36_order-note	String with length of 0 or 1-36 characters.	Yes	Example note.	Order Note	5	Custom parameter reserved for shop system to use.
t-f-14-19_order-timestamp	yyyy-MM-dd HH:mm:ss	No	2010-01-01 01:01:32	Order Timestamp	5	UTC timestamp defining the orders time from web shop point of view.
t-f-14-19_payment-timestamp	yyyy-MM-dd HH:mm:ss	No	2010-01-01 01:01:32	Payment Timestamp	5	UTC timestamp defining the payment start time from web shop point of view. If payment is retried then payment timestamp has to differ from first payment for same order.
i-t-1-4_sub-payment-method-profile-number	Integer value between 0 to 3	No	0	Sub payment method	5	Sub payment method is mandatory for Afterpay API.

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.	No	Example	Item Name	3	Item name of the Nth basket item.
I-t-1-20_bi-unit-cost-<N>	64 bit signed integer value formatted as a string with 1-20 numeric characters. Must not be present if unit gross cost is used.  Must be filled if unit gross cost is not filled. Must not be filled if it is.	No	1000	Item Unit Cost	3	Unit cost with two decimal precision but without discount and tax. Example value corresponds to 10 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 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.  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.)  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.
I-t-1-20_bi-unit-gross-cost-<N>	64 bit signed integer value formatted as a string with 1-20 numeric characters. Must not be filled if unit cost is not filled. Must not be filled if it is.	No	124	Item Unit Gross Cost	3	Unit cost including discount and tax with two decimal precision. Example value corresponds 1 EUR , 24% vat and 0% discount.
i-t-1-4_bi-vat-percentage	Integer formatted as string with 0,1-4 numeric characters	No	2300	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-1-11_bi-unit-count-<N>	Integer value formatted as string with 1-11 numeric characters.	No	1	Item Unit Count	3	Number of units in the item.
I-t-1-20_bi-gross-amount-<N>	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	1230	Item Gross Amount	3	Item gross amount including tax and discount with two decimal precision. Example value corresponds to 10 EUR with 23% VAT, 0% discount.
I-t-1-20_bi-net-amount-<N>	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	1000	Item Net Amount	3	Item net amount calculated from unit cost times unit count with two decimal precision. Example value corresponds to 10 EUR.
i-t-1-4_bi-discount-percentage-<N>	Integer formatted as string with 0,1-4 numeric characters	No	50	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.



## Afterpay Invoice payment Response Fields

Name	Format	Opt	Example value	Title	Version	Description
i-f-1-11_interface-version	String with length of 1-10 characters.	No	1	Interface Version	3	Version of the payment interface.
l-f-1-20_transaction-number	Integer value formatted as string with 1-20 numeric characters.	No	821613	Transaction Number	3	Unique number from identifying the payment transaction.
s-t-1-10_payment-request-result	String with length of 1-10 characters.	No	PAID	Payment Result Code	3	Code defines the status/result of the transaction during callback.
s-f-1-10_software-version	String with length of 1-10 characters.	NO	1.0.1	Version	5	Version of the payment system.
s-f-1-30_payment-method-code	String with length of 1-30 characters.	No	swish	Payment Method	5	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 0 or 1-36 characters.	Yes	Example note.	Order Note	3	Custom parameter reserved for shop system to use.
t-f-14-19_order-timestamp	yyyy-MM-dd HH:mm:ss	No	2018-06-11 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	752	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	Gross amount including tax with two decimal
s-t-256-256_signature-two	String with length of 512 characters.	Yes	fa12...ff	Signature Two	3	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-one	String with length of 512 characters.	Yes	fa12...ff	Signature One	3	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.

## Error Messages

Name	Message	Description
Connection failed	failed-to-contact-services	Connection or request failed internally
Address mismatch	cancel-ext-address-mismatch	Invalid address details provided which is not matching with address details of SSN
Payment failed	authorization-rejected	General error message in case payment failed
Invalid SSN	invalid-social-security-number	Invalid SSN provided
Invalid sub payment method	invalid-sub-payment-method	Invalid sub method method
Invalid payment method	method-not-supported	Provided payment not supported

## 3DS Lookup (3ds-lookup)

### Additional Request Fields

Name	Format	Opt	Example Value	Title	Version	Description
i-f-1-3_order-currency-code	Integer with length of 1-3 numeric characters.	No	978	Currency Code	5	Numeric ISO 4217 currency code.
i-f-1-3_bill-to-address-country-code	Integer with length of 1-3 characters.	No	246	Bill to Address Country Code	5	Numeric ISO 3166 country code of the bill to address.

I-f-1-20_order-gross-amount	64 bit signed integer value formatted as a string with 1-20 numeric characters.	No	1230	Gross Amount	5	Gross amount including tax with two decimal precision.
s-t-1-30_buyer-phone-number	String with length of 1-30 characters.	Yes	+358 40 234234	Phone Number	5	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	5	Email address of the buyer.
s-f-1-30_buyer-first-name	String with length of 1-30 characters.	No	John	First Name	5	First name of the buyer.
s-f-1-30_buyer-last-name	String with length of 1-30 characters.	No	Smith	Last Name	5	Last name of the buyer.
s-f-1-36_order-number	String with length of 1-36 characters.	No	123	Order Number	5	Textual order number assigned by shop system. Valid characters are a-z, A-Z, 0-9 and minus sign.
s-t-1-255_buyer-external-id	String with length of 1-255 characters.	Yes	6633	Buyer External Identifier	5	Identifier of the buyer assigned by web shop. Not recommended to be used. Using this will be replace identification mechanism normally based on other mandatory user details.
s-f-1-50_df-reference-id	String with length of 1-50 characters.	No	1234	DF Reference ID	5	Reference Id that relates to the device data that was previously collected.
s-f-1-30_bill-to-address-city	String with length of 1-30 characters.	No	Helsinki	Bill to Address City	5	City of the delivery address.
s-f-1-30_bill-to-address-line-one	String with length of 1-30 characters.	No	Street 31	Bill to Address Line #1	5	Line one of the bill to address.
s-t-1-2_bill-to-address-state	String with length of 1-2 characters.	Yes	18	Bill to Address State	5	Consumer's state or province of their billing address. <b>Note:</b> Must be the country subdivision code defined in ISO 3166-2.
s-f-1-30_bill-to-address-postal-code	String with length of 1-30 characters.	No	00270	Delivery Address Postal Code	5	Postal code of the delivery address.
s-t-1-1_transaction-mode	String with length of 1 character.	Yes	T	Transaction Mode	5	Transaction mode identifier. Identifies the channel the transaction originates from.  <b>Available Options:</b>  M - Moto (Mail Order Telephone Order)  P - Mobile Device  R - Retail (Physical Store)  S - Computer Device  T - Tablet Device
I-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	5	ID of the saved payment method. Parameter can be omitted only with parameter s-t-256-512_encrypted-card-details. This is allowed only for merchant that is PCI enabled.
s-t-256-512_encrypted-card-details	String with length of 256-512 characters.	Yes	FA12...FF	Encrypted card details	5	<PAN>=<MMyyyy> padded with PKCS #1 padding and RSA encrypted and converted to upper case hexadecimal string. This is allowed only for merchant that is PCI enabled.
s-t-1-30_delivery-address-line-one	String with length of 0 or 1-30 characters.	Yes	Street 31	Delivery Address Line #1	5	Line one of the delivery address.
s-t-1-30_delivery-address-line-two	String with length of 0 or 1-30 characters.	Yes	Apartment 2	Delivery Address Line #2	5	Line two of the delivery address.
s-t-1-30_delivery-address-line-three	String with length of 0 or 1-30 characters.	Yes	Room 3	Delivery Address Line #3	5	Line three of the delivery address.
s-t-1-30_delivery-address-city	String with length of 0 or 1-30 characters.	Yes	Helsinki	Delivery Address City	5	City of the delivery address.
s-t-1-30_delivery-address-postal-code	String with length of 0 or 1-30 characters.	Yes	00270	Delivery Address Postal Code	5	Postal code of the delivery address.
i-t-1-3_delivery-address-country-code	String with length of 0 or 1-3 characters.	Yes	246	Delivery Address Country Code	5	Numeric ISO 3166 country code of the delivery address.

i-t-1-2_shipping-method-indicator	Integer with length 1 to 2 characters.	Yes	1	Shipping Method Indicator	5	Shipping method indicator used towards 3D Secure v2 payments.  Possible values:  1: Ship to buyer billing address. Bill-to address details are sent to the issuer, if bill-to address is not present, delivery-address is used instead. Used by default.  2: Ship to a merchant verified delivery address. Bill-to address and delivery-address details are sent to the issuer.  3: Ship to an unverified delivery address. Bill-to address and delivery-address details are sent to the issuer.  4: Ship to store. Bill-to address fields indicate buyer details, delivery-address details provide the store address details where pickup is done.  5: Digital goods. s-t-1-100-delivery-address-email may be additionally provided if delivery is to a different email address.  6: Travel and event tickets that are not physically delivered. delivery-address-email may be used as with case 5.  7: Other.
s-t-1-100_delivery-address-email	String with length of 0 or 1-100 characters	Yes	john.smith@gmail.com	Delivery Email Address	5	Delivery Email Address

### Additional Response Fields

Name	Format	Opt	Example Value	Title	Version	Description
s-t-1-30_lookup-result	String with length of 1-30 characters.	No	challenged	Lookup Result	5	Result of the lookup. Available values:  authenticated - authentication was success. s-t-1-40_cavv, s-t-1-2_eci-flag, s-t-1-36_ds-transaction-id and s-t-1-40_xid will be present in the response.  challenged - step up to strong customer authentication was required by the issuer. s-t-1-2048_acs-url and s-t-1-2048_payload will be present in the response.  3ds-v1-required - Issuer is not enrolled to 3DSv2. Authentication must be done using 3DS v1 via the Verifone HPP interface.  not-enrolled - Card is not enrolled to 3DS  rejected - rejected by the issuer. Payment may not continue.  failed - Lookup could not be performed for some reason. See <i>s-f-1-30_error-message</i> for details.
s-t-1-36_ds-transaction-id	String with length of 1-36 characters	Yes	ABC12345678	DS Transaction ID	5	Unique transaction identifier assigned by the Directory Server (DS) to identify a single transaction.  <i>Present only with lookup-result <b>authenticated</b>. Required for process-payment if available.</i>
s-t-1-2_eci-flag	String with length of 1-2 characters	Yes	02	ECI flag	5	Electronic Commerce Indicator (ECI) from 3DS.  <b>Possible Values:</b> 02 or 05 - Fully Authenticated Transaction 01 or 06 - Attempted Authentication Transaction 00 or 07 - Non 3-D Secure Transaction Mastercard - 02, 01, 00 VISA - 05, 06, 07 AMEX - 05, 06, 07 JCB - 05, 06, 07 DINERS CLUB - 05, 06, 07  <i>Present only with lookup-result <b>authenticated</b>. Required for process-payment if available.</i>
s-t-1-40_cavv	String with length of 1-40 characters	Yes	AAAEFEBABABA BABABABABABA BA	CAVV	5	Cardholder Authentication Verification Value (CAVV) / Authentication Verification Value / (AVV) / Universal Cardholder Authentication Field (UCAF) received from 3DS.  <i>Present only with lookup-result <b>authenticated</b>. Required for process-payment if available.</i>
s-t-1-40_xid	String with length of 1-40 characters	Yes	AAAAAAAAAAAA AAAAAAAAAA	XID	5	Transaction identifier resulting from authentication processing.  <i>Present only with lookup-result <b>authenticated</b>. Required for process-payment if available.</i>

s-t-1-2048_payload	String with length of 1-2048 characters	Yes	AAAAAAAAAAAA AAAAAAAAAAAA	Payload	5	Payload generated by Centinel for the SDK.  <i>Present only with lookup-result <b>authenticated</b> and <b>challenged</b>. Must be passed onto the SDK.</i>
s-t-1-20_sdk-transaction-id	String with length of 1-20 characters.	Yes	ABCDEFGHIJKL M1234	SDK Transaction ID	5	Cardinal server transaction identifier. Used to link up the lookup and Authenticate messages with the SDK flow.  <i>Present only with lookup-result <b>challenged</b>. Must be passed onto the SDK.</i>
s-t-1-2048_acs-url	String with length of 1-2048 characters	Yes	<a href="https://acs.3dsecure.com/authenticate">https://acs.3dsecure.com/authenticate</a>	ACS URL	5	The fully qualified URL to redirect the Consumer to complete authentication by the SDK.  <i>Present only with lookup-result <b>challenged</b>. Must be passed onto the SDK.</i>
s-f-1-30_error-message	String with length of 1-30 characters	Yes	ds-unavailable	Error message	5	Raised if there was an error performing the lookup.

## Service Agreement

Service agreement is required for using the server interface. The service agreement can be acquired through Verifone sales:

### Finland

Phone: +358 9 477 433 40

Email: [myynti@verifone.fi](mailto:myynti@verifone.fi)

### Norway

Sales/Call center: [kundeservice@verifone.no](mailto:kundeservice@verifone.no)

Email: [support@verifone.no](mailto:support@verifone.no)

Phone 1<sup>st</sup> line: +47 815 02 200

## Technical Support

Technical support for integration is available through Verifone customer support:

### Finland

Email: [asiakaspalvelu@verifone.fi](mailto:asiakaspalvelu@verifone.fi)

### Norway

Mail Incident Manager: [incidentmanager@verifone.no](mailto:incidentmanager@verifone.no)

Phone Incident Manager: +47 969 01 873

Mail Crisis Management Team: [IM-drift@verifone.no](mailto:IM-drift@verifone.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 eCommerce System public key to customer via Verifone TCS Client reporting service.

## Implementation

## Checking Response Fields

It is important to do the following checks on the responses:

- 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)
- I-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 Verifone 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: <https://epayment.test.point.fi/pw/serverinterface>

## Production

Production environment URLs are:

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

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

## Appendix

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	S-Pankki interface doesn't support refunds.
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	Danske Bank Finland. Danske interface doesn't support refunds.
tapiola-verkkomaksu	TAPIOLA_VERKKOMAKSU	BANK	Deprecated, not in use anymore.
handelsbanken-e-payment	HANDELSBANKEN_E_PAYMENT	BANK	
alandsbanken-e-payment	ALANDSBANKEN_E_PAYMENT	BANK	Ålandsbanken interface doesn't support refunds.
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 and delivery address 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	Requires delivery country and basket items
svea-webpay-installment	SVEA_WEBPAY_INSTALLMENT	INVOICE	Requires delivery country and basket items
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	
enterpay-invoice	ENTERPAY_INVOICE	INVOICE	Lasku <a href="https://www.yritykselle.fi">Yritykselle.fi</a> , requires basket items.
euroloan-invoice	EUROLOAN_INVOICE	INVOICE	Euroloan requires basket items in the request.
arvato-afterpay-invoice	ARVATO_AFTERPAY_INVOICE	INVOICE	
visa-electron	VISA_ELECTRON	CARD	bin table must be installed, in order to use this payment method.
master-card-maestro	MASTER_CARD_MAESTRO	CARD	bin table must be installed, in order to use this payment method.
jcb	JCB	CARD	
seb-ee	SEB_EE	BANK	
danske-bank-ee	DANSKE_BANK_EE	BANK	
swedbank-lv	SWEDBANK_LV	BANK	
swedbank-lt	SWEDBANK_LT	BANK	
paypal	PAYPAL	INVOICE	
swish	SWISH	BANK	
siirto	SIIRTO	BANK	
oma-saastopankin-verkkomaksu	OMA_SASTOPANKIN_VERKKOMAKSU	BANK	
afterpay-invoice	AFTERPAY_INVOICE	INVOICE	Current; AfterPay v3 API
vipps	VIPPS	CARD	Wallet payment. Payment method used in payment, depends on which card user selects from the wallet.
mobilepay	MOBILEPAY	CARD	Wallet payment. Payment method used in payment, depends on which card user selects from the wallet.

## Error Codes

Possible error codes which server to server interface can return during its operations. New error codes may be added without prior notice.

Error Code	Description
system_error	System error occurred while processing request.
signature_verification_failed	Indicates that signature verification was not successful.
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.
s2s-3ds-not-allowed-by-method	For Server API 3DS not allowed by payment method.

Possible error codes returned by payment validator.

order-number-not-valid	order number not valid
invalid-currency	invalid currency
invalid-currency-code	invalid currency code
invalid-payment-timestamp	invalid payment timestamp
delivery-address-country-code	delivery address country code
deferred-payment-not-0-or-1-or-2	deferred payment not 0 or 1 or 2
partial-capture-not-supported	partial capture not supported
invalid-card-security-code	invalid card security code
recurring-payment-parameter	recurring payment parameter
recurring-payment-name	recurring payment name
recurring-payment-mandatory	recurring payment mandatory
recur-subscrip-expec-per-mand	recur subscrip expec per mand
invalid-save-payment-method	invalid save payment method
invalid-save-payment-method	invalid save payment method
invalid-register-token	invalid register token
skip-confirmation-page	skip confirmation page
invalid-payment-method-code	invalid payment method code
lost-saved-payment-method-id	lost saved payment method id
invalid-payment-method-code	invalid payment method code
error-no-basket-items	error no basket items
negative-transaction-number	negative transaction number
payment-method-missing	payment method missing
invalid-input-channel	invalid input channel
channel-mode-inv-missing-param	channel mode invalid missing parameters
channel-mode-inv-product-nr	channel mode invalid product number input
subscription-expected-period	subscription expected period
invalid-subscription-end	invalid subscription end
error-unknown-parameter-type	validation error unknown parameter type
subscription-expected-period	subscription expected period
invalid-subscription-end	invalid subscription end
cancel-pay-reject-incor-amt	Payment has been rejected because payment amount is incorrect
invalid-payment-req-collector	Payment Rejected by Collector
delivry-addr-crdt-chk-mismatch	The given delivery address doesn't match credit check result
invalid-merchant-agrmnt-code	invalid merchant agreement code
validation-error-callback-url	Validation failed for callback url
error-missing-callback-url	Missing callback url

payer-not-enrolled	Payer not enrolled
invalid-phone-number	Invalid phone number
phone-number-empty	Phone number is empty
non-number-in-phone-number	Phone number contains non number
too-long-phone-number	Phone number is too long
too-short-phone-number	Phone number is too short

Operation related error codes.

unknown-error	unknown error
system-error	system error
signature-verification-failed	signature verification failed
merchant-agreement-not-found	merchant agreement not found
access-denied	Merchant agreement is not allowed to perform the operation requested. Contact Verifone to add these functions to the agreement.
no-acquirer-agreements	No available payment methods configured on the requested merchant agreement with the currency or amount given.
buyer-payments-disabled	Payments on the merchant agreement have been disallowed. Contact Verifone to (re)enable.
failed	failed
service-unavailable	Requested service is currently unavailable. Attempt again later. This can be due to backend maintenance and affects calls such as debit-payment that do not need to be handled realtime.
invalid-expiration-date	invalid expiration date
unknown-saved-payment-method	unknown saved payment method
not-allow-payment-by-merchant	not allow payment by merchant
not-allow-payment-by-acquirer	not allow payment by acquirer
invalid-card-number	invalid card number
invalid-currency	invalid currency
invalid-payment-method	invalid payment method
invalid-order-number	invalid order number
order-already-debited	order already debited
invalid-order-amount	invalid order amount
invalid-transaction-number	invalid transaction number
order-already-canceled	order already canceled
unknown-terminal	unknown terminal
token-not-found	token not found
invalid-service	invalid service
not-supported-by-interface-ver	not supported by interface version
unsupported-auth-cancel	unsupported authorization cancel



token-expired	token expired
token-deleted	token deleted
failed-to-contact-services	failed to contact services
invalid-payment	invalid payment
invalid-phone-number-missing	invalid phone number missing
invalid-values-anonymous-buyer	invalid values anonymous buyer
incorrect-payment-method	incorrect payment method
payment-rejected	payment rejected
incorrect-token	incorrect token
incorrect-payment-link-number	incorrect payment link number
incorrect-link-delivery-mode	incorrect link delivery mode
sms-phone-number-missing	sms phone number missing
payment-link-inv-mer-agreement	invalid payment link merchant agreement
payment-link-not-found-for-upd	payment link not found for update
token-terminal-serial-missing	terminal serial not found for token update - contact Verifone to add token terminal serial to your ecom configuration.
buyer-email-invalid	buyer email id not in format. eg. abc@abc.com
sender-email-invalid	sender email id not in format. eg. abc@abc.com
partial-approval-not-allowed	Partial approval not allowed. Please contact Verifone.
part-approval-req-deferred-pmt	Partial approval requires deferred payment
supplementary-auth-not-supported	Supplementary auth is not supported if Afd Advice and AfdSupplementaryAuth is not enabled for the acquirer
already-suppl-authorized	Supplementary already processed for the original transaction number.
invalid-merchant-agreement-code	Process Supplementary merchant agreement code is not matching with original transaction merchant agreement code
error-orig-txn-wrong-status	process-supplementary is called when original transaction is not in debited/committed state.
failed-contact-swish-service	Failed to contact Swish server.
method-not-supported	Method not supported
counterpart-not-activated	Account not activated.
payee-not-enrolled	Merchant account not enrolled for payment method.
payee-payment-ref-invalid	Payment reference invalid
payee-alias-invalid	Payee alias is invalid.
duplicate-payment-request	Another payment waiting for approval.

transaction-declined	Transaction declined.
swish-payment-creation-error	Payment creation error.
user-not-registered	User is not registered to 3rd party payment method provider, e.g. wallet
app-version-not-supported	User is using old 3rd party application, such as a wallet, which is not supported
invalid-payment-model-type	Payment model type is not supported for the user
pspid-not-enrolled-in-provider	An error in payment configuration for the merchant, contact Verifone
transaction-id-already-exists	A transaction for this order number has already been done (e.g. with wallet payments)
invalid-ecom-configuration	Payment method has invalid configuration, contact Verifone
incompatible-payment-method	Selected payment method is not available, choose another payment method or contact Verifone
payment-requires-3ds	Indicates that 3DS authentication is required. To avoid this error, must go to hosted payment page with same saved-payment-method-id + buyer details

### failed-to-contact-services

I-f-1-20\_order-vat-amount