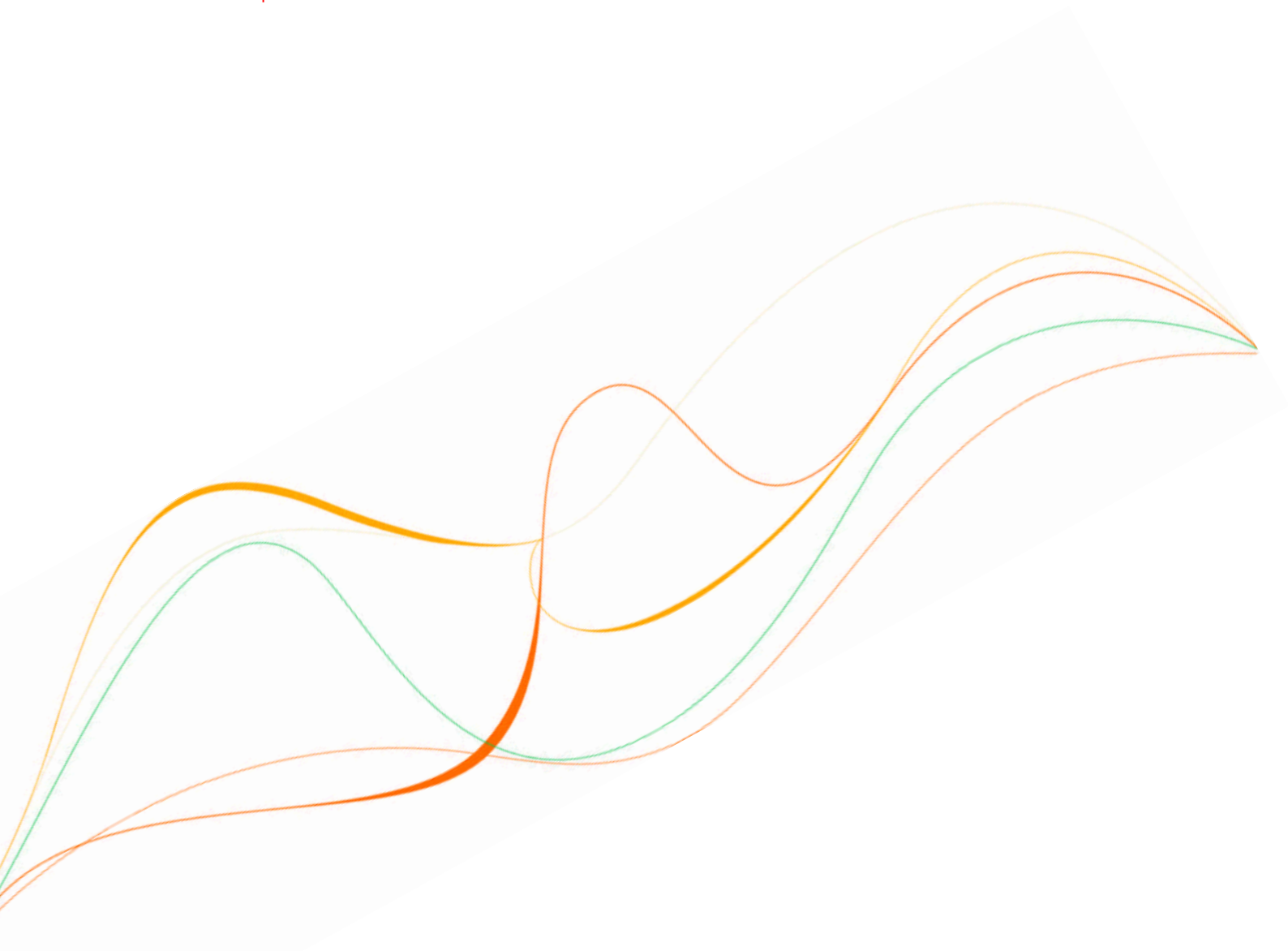**sage**pay

Server and Direct Shared Protocols

IMPORTANT: Before reading this document, you should have read through the Server or Direct Protocol and Integration Guidelines that accompany it. These explain the terms used here and will give you an understanding of how the Sage Pay Systems work.

If you are a Form customer, this document does not apply to you, and you should use the *My Sage Pay* interface to perform actions such as transaction RELEASEs or REFUNDs.

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Automating More than Payments

Direct and Server place you in control of your transactions. Because you have your own secure database servers and web servers on which you store details of your customers and their transactions, you may well wish to automate many of the daily procedures, such as RELEASEing and ABORTing DEFERRED transactions, requesting an AUTHORISE against an AUTHENTICATE, REPEATing payments or issuing REFUNDs to customers.

All these actions can be performed via the *My Sage Pay* screens (which can be found at the URLs below), so it is not necessary to implement these additional parts of the protocols if you do not wish to. *My Sage Pay*, however, was designed for people to use and is not friendly to automated systems. If you wished to release 100 transactions per day at 11pm, it would be a chore to have to log into *My Sage Pay* every night to do so.

My Sage Pay Test Site: https://test.sagepay.com/mysagepay

My Sage Pay Live Site: https://live.sagepay.com/mysagepay

The processes of RELEASEing a payment, or REFUNDing a transaction, are essentially the same as registering a Server or Direct payment. Your server sends an HTTPS POST containing a collection of Name=Value pairs directly to the Sage Pay system, which validates the information and either carries out the instruction returning an **OK** status and any relevant transaction ids and authorisation codes for you to store in your database, or generates an **INVALID**, **MALFORMED**, **NOTAUTHED** or **ERROR** Status with a description of the error in the **StatusDetail** field.

Whether you use Server or Direct for Payment registration, all additional protocol messages are sent to the same set of services. The URLs for the system are:

Simulator: https://test.sagepay.com/Simulator/VSPServerGateway?service={service}

Test Site: https://test.sagepay.com/gateway/service/{service}

Live Site: https://live.sagepay.com/gateway/service/{service}

In each case the {service} is replaced with the name of the Service you are requesting, which is shown at the top of each section of the protocol in the Appendix.

So, for example, if you wished to VOID a payment (see Appendix A9) on the Test Server, you would retrieve the VendorTxCode, VPSTxId, SecurityKey and TxAuthNo of the payment from your database and send them as Name=Value pairs in an HTTPS POST to https://test.sagepay.com/gateway/service/void.vsp , then check the response fields for a Status of OK or examine StatusDetail to determine what went wrong.

Additional Protocol Components

Using the transaction ids from your original transactions that are held in your database, you can perform the following actions:

- **RELEASE** a DEFERRED or REPEATDEFERRED transaction. This marks such transactions as ready to be settled with your acquiring bank. Until RELEASEd no funds are taken for such transactions.

- **ABORT** a DEFERRED or REPEATDEFERRED transaction. This cancels a transaction in the DEFERRED state to ensure it can never be settled with your acquiring bank.

- **REFUND** either an entire transaction or any part of it. You can perform multiple refunds against a payment as long as the total value of those refunds does not exceed the amount of the original transaction.

- **REPEAT** or **REPEATDEFERRED** a transaction. Any authorised transaction can be used as the basis for a REPEAT. A REPEAT transaction simply uses the card that was used in the original authorised transaction, and charges it again with the Amount specified in the REPEAT. You can REPEAT for any Amount; it does not have to match the value of the original transaction.

  REPEAT effectively takes a PAYMENT from a card that has been used before, which means that a REPEAT payment is always settled with your bank the following morning. If you wish to take a DEFERRED payment using a card that has been used in a previous transaction, you should use REPEATDEFERRED instead of REPEAT. Like a DEFERRED payment, these must be RELEASEd before funds are transferred to your account.

- **VOID** an authorised transaction. If you have taken a PAYMENT or RELEASED a DEFERRED transaction and do not wish it to be settled because the customer has cancelled their order (or you wish to), you can send a VOID message to prevent the transaction from ever being settled. **This only works BEFORE the transaction has been settled**. As soon as a transaction has been settled, it can no longer be VOIDed and must be REFUNDed instead. The advantage with a VOID over a REFUND is that because the transaction is never settled, you will not be charged Merchant Fees by your bank. In a REFUND situation you will normally be charged for both the initial payment the refund.

- Take a **MANUAL** payment. MANUAL payments allow you to settle transactions with your bank that you have not authorised through the SAGE PAY Systems. Some transactions, for example high value payments, will not be authorised online, but if you call your acquiring bank as perform a Code 10 check and manual authorisation, the transaction may well be authorised and you will be given an authorisation code. You can use the MANUAL payment to submit the transaction details and authorisation code to our system for settlement with the bank.

- Request a **DIRECTREFUND** to a card. If you wish to REFUND transactions, they must have been taken via the Sage Pay systems in the first place. In some circumstances this is not the case. You may have taken the original payment via a PDQ machine or using a different payment processor. DIRECTREFUND is like a MANUAL payment but credits the supplied card instead of debiting it. This part of the protocol is never enabled by default because of the associated risks of fraud.

- **AUTHORISE** an AUTHENTICATEd transaction. If you used a transaction type of AUTHENTICATE when you registered your transaction and received either an AUTHENTICATED or REGISTERED response, then the card details and any authentication information from the 3D-Secure process are being held at Sage Pay for up to 90 days, awaiting an authorisation to be performed against them. Sending an AUTHORISE request does just that. Like REFUNDs, you can perform any number of AUTHORISE requests against an AUTHENTICATEd transaction so long as (i) the 90 day period has not expired (30 days for International Maestro cards) and (ii) the total amount of all authorisations does not exceed 115% of the authentication value (for International Maestro the limit is 100%).

- **CANCEL** an AUTHENTICATEd transaction. If you do not wish to AUTHORISE an AUTHENTICATED or REGISTERED transaction, you can send a CANCEL message to archive it away so that it can no longer be used.   A CANCEL cannot be reversed, so only send a cancel when you are certain you no longer need the original transaction. CANCELs happen automatically after (i) 90 days (30 days for International Maestro) or (ii) you AUTHORISE between 100% and 115% of the Authentication value.

Not all message types are available by default, and if you wish to use them, you may need to mail support@sagepay.com to ask for them to be activated on your account.

Additional Transaction Types and the Simulator

The Simulator can handle all the additional transaction types discussed above. It will accept PAYMENT, AUTHENTICATE and DEFERRED transactions at the registration stage, plus it has services that emulate those of the real servers when you send REFUND, RELEASE, ABORT, REPEAT, AUTHORISE, CANCEL and VOID messages to it.

The additional transaction types, however, do not have a user configurable interface associated with them. By default they are all set to Automatic mode, so they will respond with an OK unless the data you send would generate a MALFORMED or INVALID response.

Appendix A – Additional Transaction Protocols

All transactions are simple synchronous HTTPS POSTs sent from a script on your servers to the Sage Pay systems, with the same script reading the Response component of that POST to determine success or failure. These POSTs can be sent using any HTTPS compatible objects (such as cURL in PHP or the WinHTTP object on Windows platforms).

The data should be sent as URL Encoded Name=Value pairs separated with & characters and sent to the Sage Pay Server URL with a Service name set to the message type in question.

The following sections detail the contents of the POSTs and responses, between your website and ours. The format and size of each field is given, along with accepted values and characters. The legend below explains the symbols:

Symbol	Description	Symbol	Description
á	Accented Characters	CR LF	New line (Carriage Return and Line Feed)
&	Ampersand character	0-9	Numbers
@	At sign	+	Plus sign
:	Colon	()	Parentheses
,	Comma	;	Semi-colon
{}	Curly Brackets	'	Apostrophe (single quote)
.	Full Stop/Period	/\	Backslash and Forward Slash
–	Hyphen		Space
Aa	Letters (A-Z and a-z)		Underscore
ISO3166	ISO 3166-1 2-letter country codes	BASE64	Valid Base64 characters (A-Z,a-z,0-9,+ and /)
US	Valid 2-letter US States	ISO4217	ISO 4217 3-letter Currency codes
RFC1738	RFC 1738 compliant HTTP(S) URL All non-compliant characters, including spaces, should be URL Encoded		
<HTML>	Valid HTML with no active content. Script will be filtered. Includes all valid letters, numbers, punctuation and accented characters.		
RFC532n	RFC 5321/5322 (see also RFC 3696) compliant e-mail Addresses.		

A1: Releasing a DEFERRED or REPEATDEFERRED Payment

This is performed via an HTTPS POST request, sent to the Release URL service **release.vsp**. The details must be URL encoded, with Name=Value fields separated by '&' characters.

Request format

Name	Format	Values	Comments
VPSProtocol	Numeric. Fixed 4 characters.	**2.23** in this release	Default or incorrect value is taken to be 2.23
TxType	Alphabetic Max 15 characters.	**RELEASE** only	Should be in capital letters
Vendor	Alphanumeric Max 15 characters.	Your unique Vendor Login Name [Aa] [0-9] [-] [_]	Used to authenticate your site. This should contain the Vendor Name supplied by Sage Pay when your account was created.
VendorTxCode	Alphanumeric Max 40 characters	The Vendor Transaction Code of the DEFERRED transaction to be released. [Aa] [0-9] [{}] [.] [-] [_]	This should be your own reference code to the original DEFERRED transaction
VPSTxId	Alphanumeric 38 characters	The Transaction ID for the DEFERRED transaction. [{}] [Aa] [0-9] [-]	As sent back by the Sage Pay system when the DEFERRED transaction was registered.
SecurityKey	Alphanumeric 10 characters	Security Key for the deferred transaction [Aa] [0-9]	The SecurityKey of the DEFERRED payment as sent back by the Sage Pay System when the transaction occurred.
TxAuthNo	Long Integer	Authorisation code for the deferred transaction. [0-9]	The TxAuthNo of the DEFERRED payment as returned by the Sage Pay system.
ReleaseAmount	Numeric 0.01 to 100,000.00	Amount to release [0-9] [,] [.]	The amount of the DEFERRED transaction to release. You can only RELEASE a DEFERRED transaction once. If you wish to perform multiple partial payments, you should use the AUTHENTICATE and AUTHORISE transaction types.

A2: Sage Pay Response to the Release POST

This is the plain text response part of the POST sent in A1. Encoding will be as Name=Value fields separated by carriage return and linefeeds (CRLF).

Response format

Name	Format	Values	Comments
VPSProtocol	Numeric. Fixed 4 characters.	**2.23** in this release	The current system version.
Status	Alphabetic Max 15 characters.	**OK** – Process executed without error. The DEFERRED payment was released. **MALFORMED** – Input message was malformed – normally will only occur during development. The StatusDetail (next field) will give more information **INVALID** – Unable to authenticate you or find the transaction, or the data provided is invalid. If the Deferred payment was already released, an INVALID response is returned. See StatusDetail for more information. **ERROR** – Only returned if there is a problem at Sage Pay.	If the status is not OK, the StatusDetail field will give more information about the problem. Please notify Sage Pay if a Status report of ERROR is seen, together with your VendorTxCode and the StatusDetail text.
StatusDetail	Alphanumeric Max 255 characters.	Human-readable text providing extra detail for the Status message.	

A3: Aborting a Deferred Payment

This is performed via an HTTPS POST sent to the Abort URL service **abort.vsp**. The details must be URL encoded, with Name=Value fields separated by '&' characters.

Request format

Name	Format	Values	Comments
VPSProtocol	Numeric. Fixed 4 characters.	**2.23** in this release	Default or incorrect value is taken to be 2.23
TxType	Alphabetic Max 15 characters.	**ABORT** only	Should be in capital letters
Vendor	Alphanumeric Max 15 characters.	Your unique Vendor Login Name [Aa] [0-9] [-] [_]	Used to authenticate your site. This should contain the Vendor Name supplied by Sage Pay when your account was created.
VendorTxCode	Alphanumeric Max 40 characters	The Vendor Transaction Code of the DEFERRED transaction to be aborted. [Aa] [0-9] [{}] [.] [-] [_]	This should be your own reference code to the original DEFERRED transaction
VPSTxId	Alphanumeric 38 characters	The Transaction ID for the DEFERRED transaction. [{}] [Aa] [0-9] [-]	As sent back by the Sage Pay system when the DEFERRED transaction was registered.
SecurityKey	Alphanumeric 10 characters	Security Key for the deferred transaction [Aa] [0-9]	The SecurityKey of the DEFERRED payment as sent back by the Sage Pay System when the transaction occurred.
TxAuthNo	Long Integer	Authorisation code for the deferred transaction. [0-9]	The TxAuthNo of the DEFERRED payment as returned by the Sage Pay system.

A4: Sage Pay Response to the Abort POST

This is the plain text response part of the POST sent in A3. Encoding will be as Name=Value fields separated by carriage-return-linefeeds (CRLF).

Response format

Name	Format	Values	Comments
VPSProtocol	Numeric. Fixed 4 characters.	**2.23** in this release	The current system version.
Status	Alphabetic Max 15 characters.	**OK** – Process executed without error. The DEFERRED payment was aborted. **MALFORMED** – Input message was malformed – normally will only occur during development. The StatusDetail (next field) will give more information **INVALID** – Unable to authenticate you or find the transaction, or the data provided is invalid. If the Deferred payment was already released, an INVALID response is returned. See StatusDetail for more information. **ERROR** – Only returned if there is a problem at Sage Pay.	If the status is not OK, the StatusDetail field will give more information about the problem. Please notify Sage Pay if a Status report of ERROR is seen, together with your VendorTxCode and the StatusDetail text.
StatusDetail	Alphanumeric Max 255 characters.	Human-readable text providing extra detail for the Status message.	

A5: Refund registration

Refunds are performed via a HTTPS POST to the Sage Pay Refund URL service **refund.vsp**. The request must be URL encoded, with Name=Value fields separated by '&' characters.

Request format

Name	Values	Value	Comments
VPSProtocol	Numeric. Fixed 4 characters.	**2.23** in this release	Default or incorrect value is taken to be 2.23
TxType	Alphabetic Max 15 characters.	**REFUND** only	Transaction type. Should be in capital letters.
Vendor	Alphanumeric Max 15 characters.	Your unique Vendor Login Name **Aa** **0-9** **-** **_**	Used to authenticate your site. This should contain the Vendor Name supplied by Sage Pay when your account was created.
VendorTxCode	Alphanumeric Max 40 characters	A new Vendor Transaction Code to identify this refund **Aa** **0-9** **{}** **.** **-** **_**	This should be your own reference code to this REFUND transaction. Your servers should provide a completely unique VendorTxCode for each transaction.
Amount	Numeric 0.01 to 100,000.00	Amount to Refund containing minor digits formatted to 2 decimal places where appropriate. **0-9** **,** **.**	IMPORTANT NOTE: You can make multiple refunds against a single transaction but the total value of all refunds CANNOT exceed the amount of the original transaction.
Currency	Alphanumeric 3 characters	Three-letter currency code to ISO 4217 Examples: **GBP**, **EUR** and **USD** **ISO4217**	The currency must be supported by one of your merchant accounts or the transaction will be rejected. It must also match the currency of the transaction being refunded.
Description	Alphanumeric 100 characters	Free text description of the reason for the refund **<HTML>**	Stored against the refund for your future reference via My Sage Pay
RelatedVPSTxId	Alphanumeric 38 characters	Transaction ID the original Transaction **{}** **Aa** **0-9** **-**	VPSTxId of the original Transaction against which the Refund is required.
RelatedVendorTxCode	Alphanumeric Max 40 characters	Vendor Transaction Code original transaction **Aa** **0-9** **{}** **.** **-** **_**	VendorTxCode of the original Transaction being refunded
RelatedSecurityKey	Alphanumeric 10 characters	Security Key for the original transaction **Aa** **0-9**	The SecurityKey of the original transaction sent back by the Sage Pay System when the transaction was registered.
RelatedTxAuthNo	Long Integer	Authorisation code for the original transaction. **0-9**	The TxAuthNo of the original transaction as returned by the Sage Pay system when it was authorised.

A6: Refund results

This is the response part of the Refund POST originated by A5. Encoding is as Name=Value fields separated by carriage-return-linefeeds (CRLF).

Response format:

Name	Format	Values	Comments
VPSProtocol	Numeric. Fixed 4 characters.	**2.23** in this release	This will match the protocol version supplied in A5.
Status	Alphabetic Max 15 characters.	**OK** – The refund was authorised by the bank and funds will be returned to the customer. **NOTAUTHED** – The refund was not authorised by the acquiring bank. No funds will be returned to the card **MALFORMED** – Input message was missing fields or badly formatted – normally will only occur during development and vendor integration. **INVALID** – Transaction was not registered because although the POST format was valid, some information supplied was invalid. E.g. incorrect vendor name or currency. **ERROR** – Only returned if there is a problem at Sage Pay.	If the status is not OK, the StatusDetail field will give more information about the problem. Please notify Sage Pay if a Status report of ERROR is seen, together with your VendorTxCode and the StatusDetail text.
StatusDetail	Alphanumeric Max 255 characters	Human-readable text providing extra detail for the Status message.	Always check StatusDetail is the Status is not OK
VPSTxId	Alphanumeric 38 characters	Sage Pay ID to uniquely identify the Transaction on our system.	Only present if Status is OK.
TxAuthNo	Numeric Long integer	The Sage Pay authorisation code (also called VPSAuthCode) for this transaction.	Only present if Status is OK.

A7: Repeat Payment Registration

Repeat Payments are performed via a HTTPS POST to the Repeat Payment URL service repeat.vsp. The request must be URL encoded, with Name=Value fields separated by '&' characters.

Request format

Name	Values	Value	Comments
VPSProtocol	Numeric. Fixed 4 characters.	**2.23** in this release	Default or incorrect value is taken to be 2.23
TxType	Alphabetic Max 15 characters.	**REPEAT** and **REPEATDEFERRED** only	Transaction type. Should be in capital letters.
Vendor	Alphanumeric Max 15 characters.	Your unique Vendor Login Name `Aa` `0-9` `-` `_`	Used to authenticate your site. This should contain the Vendor Name supplied by Sage Pay when your account was created.
VendorTxCode	Alphanumeric Max 40 characters	A new Vendor Transaction Code to identify this Repeat transaction `Aa` `0-9` `{}` `.` `-` `_`	This should be your own reference code to this REPEAT transaction. Your servers should provide a completely unique VendorTxCode for each transaction.
Amount	Numeric 0.01 to 100,000.00	Amount for the REPEAT containing minor digits formatted to 2 decimal places where appropriate. `0-9` `,` `.`	IMPORTANT NOTE: You can repeat charge a card for any amount. The amount does NOT need to match that of the original transaction.
Currency	Alphanumeric 3 characters	Three-letter currency code to ISO 4217 Examples: **GBP**, **EUR** and **USD** `ISO4217`	The currency must be supported by one of your merchant accounts or the transaction will be rejected. You can REPEAT any currency that is active on your account, irrespective of the currency of the original transaction
Description	Alphanumeric 100 characters	Free text description of the Repeat Payment `<HTML>`	Stored against the refund for your future reference via My Sage Pay
RelatedVPSTxId	Alphanumeric 38 characters	Transaction ID the original Transaction `{}` `Aa` `0-9` `-`	VPSTxId of the original Transaction against which the Repeat is required.
RelatedVendorTxCode	Alphanumeric Max 40 characters	Vendor Transaction Code original transaction `Aa` `0-9` `{}` `.` `-` `_`	VendorTxCode of the original Transaction being Repeated
RelatedSecurityKey	Alphanumeric 10 characters	Security Key for the original transaction `Aa` `0-9`	The SecurityKey of the original transaction sent back by the Sage Pay System when the transaction was registered.
RelatedTxAuthNo	Long Integer	Authorisation code for the original transaction. `0-9`	The TxAuthNo of the original transaction as returned by the Sage Pay system when it was authorised.
Optional: CV2	Numeric Max 4 characters	The 3 or 4 digit card security code `0-9`	This is optional for REPEATs but can be provided if you ask the customer to supply it again.

A8: Repeat Payment Results

This is the response part of the Repeat POST originated by A7. Encoding is as Name=Value fields separated by carriage-return-linefeeds (CRLF).

Response format (continued overleaf)

Name	Format	Values	Comments
VPSProtocol	Numeric. Fixed 4 characters.	**2.23** in this release	This will match the protocol version supplied in A7.
Status	Alphanumeric Max 15 characters.	**OK** – The Repeat payment was authorised by the bank and funds will be charged to the customer's card. **NOTAUTHED** – The Repeat was not authorised by the acquiring bank. No funds will be charged to the card. **MALFORMED** – Input message was missing fields or badly formatted – normally will only occur during development and vendor integration. **INVALID** – Transaction was not registered because although the POST format was valid, some information supplied was invalid. E.g. incorrect vendor name or currency. **ERROR** – Only returned if there is a problem at Sage Pay .	If the status is not OK, the StatusDetail field will give more information about the problem. Please notify Sage Pay if a Status report of ERROR is seen, together with your VendorTxCode and the StatusDetail text.
StatusDetail	Alphanumeric Max 255 characters	Human-readable text providing extra detail for the Status message.	Always check StatusDetail is the Status is not OK
VPSTxId	Alphanumeric 38 characters	Sage Pay ID to uniquely identify the Repeat Transaction on our system.	Only present if Status is OK.
TxAuthNo	Numeric Long integer	The Sage Pay authorisation code (also called VPSAuthCode) for this Repeat.	Only present if Status is OK.
SecurityKey	Alphanumeric 10 characters	Security key for this Repeat payment.	Should be kept secret from the Customer. Only present if Status is OK.
AVSCV2	Alphanumeric Max 50 characters	Response from AVS and CV2 checks. Will be one of the following: **ALL MATCH, SECURITY CODE MATCH ONLY, ADDRESS MATCH ONLY, NO DATA MATCHES** or **DATA NOT CHECKED.**	Provided for Vendor info and backward compatibility with the banks. Rules set up at the server will accept or reject the transaction based on these values. More detailed results are split out in the next three fields. **Only Present if CV2 supplied in request!**

Response format (continued …)

AddressResult	Alphanumeric Max 20 characters	**NOTPROVIDED, NOTCHECKED, MATCHED, NOTMATCHED**	The specific result of the checks on the cardholder's address numeric from the AVS/CV2 checks. **Only Present if CV2 supplied in request!**
PostCodeResult	Alphanumeric Max 20 characters	**NOTPROVIDED, NOTCHECKED, MATCHED, NOTMATCHED**	The specific result of the checks on the cardholder's Post Code from the AVS/CV2 checks. **Only Present if CV2 supplied in request!**
CV2Result	Alphanumeric Max 20 characters	**NOTPROVIDED, NOTCHECKED, MATCHED, NOTMATCHED**	The specific result of the checks on the cardholder's CV2 code from the AVS/CV2 checks. **Only Present if CV2 supplied in request!**

A9: Voiding a Transaction

Voids are performed via HTTPS POSTs sent to the Void URL service **void.vsp**. The details must be URL encoded, with Name=Value fields separated by '&' characters.

Request format:

Name	Format	Values	Comments
VPSProtocol	Numeric. Fixed 4 characters.	**2.23** in this release	Default or incorrect value is taken to be 2.23
TxType	Alphabetic Max 15 characters.	**VOID** only	Should be in capital letters
Vendor	Alphanumeric Max 15 characters.	Your unique Vendor Login Name [Aa] [0-9] [-] [_]	Used to authenticate your site. This should contain the Vendor Name supplied by Sage Pay when your account was created.
VendorTxCode	Alphanumeric Max 40 characters	The Vendor Transaction Code of the transaction to be VOIDed. [Aa] [0-9] [{}] [.] [-] [_]	This should be your own reference code to the original transaction
VPSTxId	Alphanumeric 38 characters	The Transaction ID for the transaction. [{}] [Aa] [0-9] [-]	As sent back by the Sage Pay system when the transaction was registered.
SecurityKey	Alphanumeric 10 characters	Security Key for the transaction [Aa] [0-9]	The SecurityKey of the transaction as sent back by the Sage Pay System when the transaction occurred.
TxAuthNo	Long Integer	Authorisation code for the transaction. [0-9]	The TxAuthNo of the transaction as returned by the Sage Pay system.

A10: Void transaction results

This is the plain text response part of the POST sent in A9. Encoding will be as Name=Value fields separated by carriage-return-linefeeds (CRLF).

Response format

Name	Format	Values	Comments
VPSProtocol	Numeric. Fixed 4 characters.	**2.23** in this release	The current system version.
Status	Alphabetic Max 15 characters.	**OK** – Process executed without error. The transaction was VOIDed successfully. **MALFORMED** – Input message was malformed – normally will only occur during development. The StatusDetail (next field) will give more information **INVALID** – Unable to authenticate you or find the transaction, or the data provided is invalid. See StatusDetail for more information. **ERROR** – Only returned if there is a problem at Sage Pay.	If the status is not OK, the StatusDetail field will give more information about the problem. Please notify Sage Pay if a Status report of ERROR is seen, together with your VendorTxCode and the StatusDetail text.
StatusDetail	Alphanumeric Max 255 characters.	Human-readable text providing extra detail for the Status message.	

A11: Manual Payment Transaction registration

This is performed via a HTTPS POST sent to the Manual payment service **manualpayment.vsp**. The details should be URL encoded Name=Value fields separated by '&' characters.

Request format (continued overleaf)

Name	Format	Values	Comments
VPSProtocol	Numeric. Fixed 4 characters.	**2.23** in this release	Default or incorrect value is taken to be 2.23.
TxType	Alphabetic Max 15 characters.	**MANUAL** ONLY	TxType should be in capital Letters
Vendor	Alphanumeric Max 15 characters.	Your unique Vendor Login Name (Aa) (0-9) (-) (_)	Used to authenticate your site. This should contain the Sage Pay Vendor Name supplied by Sage Pay when your account was created.
VendorTxCode	Alphanumeric Max 40 characters	Vendor Transaction Code (Aa) (0-9) ({}) (.) (-) (_)	This should be your own reference code to the transaction. Your site should provide a completely unique VendorTxCode for each transaction.
Amount	Numeric. 0.01 to 100,000.00	Amount for the Transaction containing minor digits formatted to 2 decimal places where appropriate. (0-9) (,) (.)	Must be positive and numeric, and may include a decimal place where appropriate. Minor digits should be formatted to two decimal places. e.g. 5.10, or 3.29. Values such as 3.235 will be rejected. Minimum for no minor unit currencies like JPY is 1.
Currency	Alphabetic 3 characters	Three-letter currency code to ISO 4217 Examples: **GBP**, **EUR** and **USD** (ISO4217)	The currency must be supported by one of your Sage Pay merchant accounts or the transaction will be rejected.
Description	Alphanumeric Max 100 characters	Free text description of goods or services being purchased (<HTML>)	The description of goods purchased for you reference in the My Sage Pay screens
CardHolder	Alphabetic Max 50 characters	The card holder's name. (Aa) (á) (/\) (&) (.) (-) (')	This should be the name displayed on the card
CardNumber	Numeric Max 20 characters	The credit or debit card number with no spaces. (0-9)	The full card number is required.

Request format (continued overleaf)

Optional: StartDate	Numeric 4 characters	The Start date (required for some Maestro, Solo and Amex) in **MMYY** format. `0-9`	The start date MUST be in MMYY format i.e. 0699 for June 1999. No / or – characters should be included
ExpiryDate	Numeric 4 characters	The Expiry date (required for ALL cards) in **MMYY** format. `0-9`	The expiry date MUST be in MMYY format i.e. 1206 for December 2006. No / or – characters should be included.
Optional: IssueNumber	Numeric Max 2 characters	The card Issue Number (some Maestro and Solo cards only) `0-9`	The issue number MUST be entered EXACTLY as it appears on the card. e.g. some cards have Issue Number "4", others have "04"
Optional: CV2	Numeric Max 4 characters	The extra security 3 digits on the signature strip of the card, or the extra 4 digits on the front for American Express Cards `0-9`	**NB: If AVS/CV2 is ON for your account this field becomes compulsory.**
CardType	Alphabetic Max 15 characters	**VISA, MC, DELTA, SOLO, MAESTRO, UKE, AMEX, DC, JCB, LASER** NB: "SWITCH" is still accepted for UK Maestro but you should now use "MAESTRO" for both UK and Int. cards	**MC** is MasterCard. **UKE** is Visa Electron. **MAESTRO** should be used for both UK and International Maestro. **AMEX**, **DC** (DINERS) can only be accepted if you have additional merchant accounts with those acquirers. **MANUAL not supported for PayPal transactions!**
BillingSurname	Alphabetic Max 20 characters	Customer's surname `Aa` `á` `/\` `&` `.` `-` `'`	In Protocol 2.23, unlike previous protocols, the Billingxxxxx columns are compulsory.
BillingFirstnames	Alphabetic Max 20 characters	Customer's first names `Aa` `á` `/\` `&` `.` `-` `'`	
BillingAddress1	Alphanumeric Max 100 characters	First line of billing address `Aa` `á` `0-9` `+` `'` `/\` `&` `:` `,` `.` `-` `CR LF` `()`	
Optional: BillingAddress2	Alphanumeric Max 100 characters	Second line of billing address `Aa` `á` `0-9` `+` `'` `/\` `&` `:` `,` `.` `-` `CR LF` `()`	
BillingCity	Alphanumeric Max 40 characters	City component of the address `Aa` `á` `0-9` `+` `'` `/\` `&` `:` `,` `.` `-` `CR LF` `()`	
BillingPostCode	Alphanumeric Max 10 characters	The Post/Zip code of the Card Holder's Billing `Aa` `0-9` `-`	

Request format (continued overleaf)

BillingCountry	Alphabetic Max 2 characters	ISO 3166-1 country code of the cardholder's billing address `ISO3166`	
Optional*: BillingState	Alphabetic Max 2 characters	State code for US customers only* `US`	
Optional: BillingPhone	Alphanumeric Max 20 characters	Phone number at billing address `0-9` `-` `Aa` `+` `( )`	
DeliverySurname	Alphabetic Max 20 characters	Customer's surname `Aa` `á` `/\` `&` `.` `-` `'`	In Protocol 2.23, unlike previous protocols, the Deliveryxxxx columns are compulsory.
DeliveryFirstnames	Alphabetic Max 20 characters	Customer's first names `Aa` `á` `/\` `&` `.` `-` `'`	
DeliveryAddress1	Alphanumeric Max 100 characters	First line of delivery address `Aa` `á` `0-9` `+` `'` `/\` `&` `:` `,` `.` `-` `CR LF` `( )`	
Optional: DeliveryAddress2	Alphanumeric Max 100 characters	Second line of delivery address `Aa` `á` `0-9` `+` `'` `/\` `&` `:` `,` `.` `-` `CR LF` `( )`	
DeliveryCity	Alphanumeric Max 40 characters	City component of the address `Aa` `á` `0-9` `+` `'` `/\` `&` `:` `,` `.` `-` `CR LF` `( )`	
DeliveryPostCode	Alphanumeric Max 10 characters	The Post/Zip code of the Card Holder's delivery address `Aa` `0-9` `-`	
DeliveryCountry	Alphabetic Max 2 characters	ISO 3166-1 country code of the cardholder's delivery address `ISO3166`	
Optional*: DeliveryState	Alphabetic Max 2 characters	State code for US customers only* `US`	
Optional: DeliveryPhone	Alphanumeric Max 20 characters	Phone number at delivery address `0-9` `-` `Aa` `+` `( )`	

Request format (continued...)

Optional: CustomerEMail	Alphanumeric Max 255 characters	The customer's e-mail address. NOTE: If you wish to use multiple e-mail addresses, you should add them using the **:** (colon) character as a separator. e.g. me@mail1.com:me@mail2.com RFC532n	The current version of Direct does not send confirmation e-mails to the customer. This field is provided for your records only.
Optional: Basket	Alphanumeric Max 7500 characters	See the next page for the Format of the Basket field <HTML>	You can use this field to supply details of the customer's order. This information will be displayed to you in *My Sage Pay*.
Optional: GiftAidPayment	Flag	**0** = This transaction is not a Gift Aid charitable donation (default) **1** = This payment is a Gift Aid charitable donation and the customer has AGREED to donate the tax.	Only of use if your vendor account is Gift Aid enabled. Setting this field means the customer has ticked a box on your site to indicate they wish to donate the tax.
Optional: ClientIPAddress	Numeric Max 15 characters	The IP address of the client connecting to your server making the payment. 0-9 .	This should be a full IP address which you can obtain from your server scripts. We will attempt to Geolocate the IP address in your reports and fraud screening.
Optional: AccountType	Alphanumeric 1 character	**E** = Use the e-commerce merchant account (default). **C =** Use the continuous authority merchant account (if present). **M =** Use the mail order, telephone order account (if present).	This optional flag is used to tell the SAGE PAY System which merchant account to use. If omitted, the system will use E, then M, then C by default.

A12: Response to the Manual Payment POST

This is the plain text response part of the POST originated by your servers in A11. Encoding will be as Name=Value fields separated by return-linefeeds (CRLF).
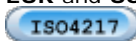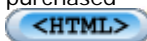
Response format

Name	Format	Values	Comments
VPSProtocol	Numeric. Fixed 4 characters.	**2.23** in this release	This will match the protocol version supplied in A7.
Status	Alphanumeric Max 15 characters.	**OK** – The Manual payment was accepted and funds will be charged to the customer's card at settlement. **MALFORMED** – Input message was missing fields or badly formatted – normally will only occur during development and vendor integration. **INVALID** – Transaction was not registered because although the POST format was valid, some information supplied was invalid. E.g. incorrect vendor name or currency. **ERROR** – Only returned if there is a problem at Sage Pay .	If the status is not OK, the StatusDetail field will give more information about the problem. Please notify Sage Pay if a Status report of ERROR is seen, together with your VendorTxCode and the StatusDetail text.
StatusDetail	Alphanumeric Max 255 characters	Human-readable text providing extra detail for the Status message.	Always check StatusDetail is the Status is not OK
VPSTxId	Alphanumeric 38 characters	Sage Pay ID to uniquely identify the Repeat Transaction on our system.	Only present if Status is OK.
TxAuthNo	Numeric Long integer	The Sage Pay authorisation code (also called VPSAuthCode) for this Repeat.	Only present if Status is OK.
SecurityKey	Alphanumeric 10 characters	Security key for this Repeat payment.	Should be kept secret from the Customer. Only present if Status is OK.

A13: Direct Refund Registration

This is performed via a HTTPS POST sent to the Direct Refund service **directrefund.vsp**. The details should be URL encoded Name=Value fields separated by '&' characters.

Request format (continued overleaf)

Name	Format	Values	Comments
VPSProtocol	Numeric. Fixed 4 characters.	**2.23** in this release	Default or incorrect value is taken to be 2.23.
TxType	Alphabetic Max 15 characters.	**DIRECTREFUND** ONLY	TxType should be in capital Letters
Vendor	Alphanumeric Max 15 characters.	Your unique Vendor Login Name `Aa` `0-9` `-` `_`	Used to authenticate your site. This should contain the Sage Pay Vendor Name supplied by Sage Pay when your account was created.
VendorTxCode	Alphanumeric Max 40 characters	Vendor Transaction Code `Aa` `0-9` `{}` `.` `-` `_`	This should be your own reference code to the transaction. Your site should provide a completely unique VendorTxCode for each transaction.
Amount	Numeric. 0.01 to 100,000.00	Amount for the Transaction containing minor digits formatted to 2 decimal places where appropriate. `0-9` `,` `.`	Must be positive and numeric, and may include a decimal place where appropriate. Minor digits should be formatted to two decimal places. e.g. 5.10, or 3.29. Values such as 3.235 will be rejected. Minimum for non minor unit currencies like JPY is 1.
Currency	Alphabetic 3 characters	Three-letter currency code to ISO 4217 Examples: **GBP**, **EUR** and **USD** `ISO4217`	The currency must be supported by one of your Sage Pay merchant accounts or the transaction will be rejected.
Description	Alphanumeric Max 100 characters	Free text description of goods or services being purchased `<HTML>`	The description of goods purchased for you reference in the My Sage Pay screens
CardHolder	Alphabetic Max 50 characters	The card holder's name. `Aa` `á` `/\` `&` `.` `-` `'`	This should be the name displayed on the card
CardNumber	Numeric Max 20 characters	The credit or debit card number with no spaces. `0-9`	The full card number is required.

Request format (continued overleaf)

Optional: StartDate	Numeric 4 characters	The Start date (required for some Maestro, Solo and Amex) in **MMYY** format. `0-9`	The start date MUST be in MMYY format i.e. 0699 for June 1999. No / or – characters should be included
ExpiryDate	Numeric 4 characters	The Expiry date (required for ALL cards) in **MMYY** format. `0-9`	The expiry date MUST be in MMYY format i.e. 1206 for December 2006. No / or – characters should be included.
Optional: IssueNumber	Numeric Max 2 characters	The card Issue Number (some Maestro and Solo cards only) `0-9`	The issue number MUST be entered EXACTLY as it appears on the card. e.g. some cards have Issue Number "4", others have "04"
CardType	Alphabetic Max 15 characters	**VISA, MC, DELTA, SOLO, MAESTRO, UKE, AMEX, DC, JCB, LASER** NB: "SWITCH" is still accepted for UK Maestro but you should now use "MAESTRO" for both UK and Int. cards	**MC** is MasterCard. **UKE** is Visa Electron. **MAESTRO** should be used for both UK and International Maestro. **AMEX, DC** (DINERS) can only be accepted if you have additional merchant accounts with those acquirers. **DIRECTREFUND not supported for PayPal transactions!**
Optional: AccountType	Alphanumeric 1 character	**E** = Use the e-commerce merchant account (default). **C** = Use the continuous authority merchant account (if present). **M** = Use the mail order, telephone order account (if present).	This optional flag is used to tell the SAGE PAY System which merchant account to use. If omitted, the system will use E, then M, then C by default.

A14: Direct Refund results

This is the response part of the Refund POST originated by A13. Encoding is as Name=Value fields separated by carriage-return-linefeeds (CRLF).

Response format

Name	Format	Values	Comments
VPSProtocol	Numeric. Fixed 4 characters.	**2.23** in this release	This will match the protocol version supplied in A5.
Status	Alphabetic Max 15 characters.	**OK** – The refund was authorised by the bank and funds will be returned to the customer. **NOTAUTHED** – The refund was not authorised by the acquiring bank. No funds will be returned to the card **MALFORMED** – Input message was missing fields or badly formatted – normally will only occur during development and vendor integration. **INVALID** – Transaction was not registered because although the POST format was valid, some information supplied was invalid. E.g. incorrect vendor name or currency. **ERROR** – Only returned if there is a problem at Sage Pay.	If the status is not OK, the StatusDetail field will give more information about the problem. Please notify Sage Pay if a Status report of ERROR is seen, together with your VendorTxCode and the StatusDetail text.
StatusDetail	Alphanumeric Max 255 characters	Human-readable text providing extra detail for the Status message.	Always check StatusDetail is the Status is not OK
VPSTxId	Alphanumeric 38 characters	Sage Pay ID to uniquely identify the Transaction on our system.	Only present if Status is OK.
TxAuthNo	Numeric Long integer	The Sage Pay authorisation code (also called VPSAuthCode) for this transaction.	Only present if Status is OK.

A15: Authorising an Authenticated/Registered Transaction

Authorise requests are performed via a HTTPS POST to the Authorise URL service **authorise.vsp**. The request must be URL encoded, with Name=Value fields separated by '&' characters.

Request format

Name	Values	Value	Comments
VPSProtocol	Numeric. Fixed 4 characters.	**2.23** in this release	Default or incorrect value is taken to be 2.23
TxType	Alphabetic Max 15 characters.	**AUTHORISE** only	Transaction type. Should be in capital letters.
Vendor	Alphanumeric Max 15 characters.	Vendor Login Name `Aa` `0-9` `-` `_`	Used to authenticate your site. This should contain the Vendor Name supplied by Sage Pay when your account was created.
VendorTxCode	Alphanumeric Max 40 characters	Vendor Transaction Code `Aa` `0-9` `{}` `.` `-` `_`	This should be your own reference code to this Authorisation. Your servers should provide a completely unique VendorTxCode for each transaction.
Amount	Numeric 0.01 to 100,000.00	Amount of the Authorisation `0-9` `,` `.`	IMPORTANT NOTE: You can make multiple Authorisations against a single Authentication but the total value of all refunds CANNOT exceed 115% of the amount of the original transaction (100% for non-UK Maestro cards)
Description	Alphanumeric 100 characters	Free text description of the Authorisation `<HTML>`	Any information you wish to supply to further identify this auhtorise payment.
RelatedVPSTxId	Alphanumeric 38 characters	Transaction ID of the Authenticate Transaction `{}` `Aa` `0-9` `-`	VPSTxId of the authenticate transaction against which the authorisation is required.
RelatedVendorTxCode	Alphanumeric Max 40 characters	Vendor Transaction Code of the Authenticate Transaction `Aa` `0-9` `{}` `.` `-` `_`	VendorTxCode of the authenticate transaction against which the authorisation is required
RelatedSecurityKey	Alphanumeric 10 characters	Security Key of the Authenticate Transaction `Aa` `0-9`	The SecurityKey of the authenticate transaction sent back by the Sage Pay System when the transaction was registered.
Optional: ApplyAVSCV2	Flag	**0** = If AVS/CV2 enabled then check them. If rules apply, use rules. (default) **1** = Force AVS/CV2 checks even if not enabled for the account. If rules apply, use rules. **2** = Force NO AVS/CV2 checks even if enabled on account. **3** = Force AVS/CV2 checks even if not enabled for the account but DON'T apply any rules.	Using this flag you can fine tune the AVS/CV2 checks and rule set you've defined at a transaction level. This is useful in circumstances where direct and trusted customer contact has been established and you wish to override the default security checks.

A16: Authorisation Results

This is the response part of the Repeat POST originated by A15. Encoding is as Name=Value fields separated by carriage-return-linefeeds (CRLF).

Response format (continued overleaf)

Name	Format	Values	Comments
VPSProtocol	Numeric. Fixed 4 characters.	**2.23** in this release	This will match the protocol version supplied in A15.
Status	Alphabetic Max 15 characters.	**OK** – The Authorisation was authorised by the bank and funds will be charged to the customer's card. **NOTAUTHED** – The Authorisation was not authorised by the acquiring bank. No funds will be charged to the card. **MALFORMED** – Input message was missing fields or badly formatted – normally will only occur during development and vendor integration. **INVALID** – Transaction was not registered because although the POST format was valid, some information supplied was invalid. E.g. incorrect vendor name or currency. **ERROR** – Only returned if there is a problem at Sage Pay.	If the status is not OK, the StatusDetail field will give more information about the problem. Please notify Sage Pay if a Status report of ERROR is seen, together with your VendorTxCode and the StatusDetail text.
StatusDetail	Alphanumeric Max 255 characters	Human-readable text providing extra detail for the Status message.	Always check StatusDetail is the Status is not OK
VPSTxId	Alphanumeric 38 characters	Sage Pay ID to uniquely identify the Authorise Transaction on our system.	Only present if Status is OK.
TxAuthNo	Numeric Long integer	The Sage Pay authorisation code (also called VPSAuthCode) for this Authorise.	Only present if Status is OK.
SecurityKey	Alphanumeric 10 characters	Security key for this Authorisation.	Should be kept secret from the Customer. Only present if Status is OK.

Response format (continued…)

AVSCV2	Alphanumeric Max 50 characters	Response from AVS and CV2 checks. Will be one of the following: **ALL MATCH, SECURITY CODE MATCH ONLY, ADDRESS MATCH ONLY, NO DATA MATCHES or DATA NOT CHECKED.**	Provided for Vendor info and backward compatibility with the banks. Rules set up at the server will accept or reject the transaction based on these values. More detailed results are split out in the next three fields.
AddressResult	Alphanumeric Max 20 characters	**NOTPROVIDED, NOTCHECKED, MATCHED, NOTMATCHED**	The specific result of the checks on the cardholder's address numeric from the AVS/CV2 checks.
PostCodeResult	Alphanumeric Max 20 characters	**NOTPROVIDED, NOTCHECKED, MATCHED, NOTMATCHED**	The specific result of the checks on the cardholder's Post Code from the AVS/CV2 checks.
CV2Result	Alphanumeric Max 20 characters	**NOTPROVIDED, NOTCHECKED, MATCHED, NOTMATCHED**	The specific result of the checks on the cardholder's CV2 code from the AVS/CV2 checks.

A17: Cancelling an Authenticated/Registered Transaction

Cancellations are performed via HTTPS POSTs sent to the Cancel URL service **cancel.vsp**. The details must be URL encoded, with Name=Value fields separated by '&' characters.

Request format

Name	Format	Values	Comments
VPSProtocol	Numeric. Fixed 4 characters.	**2.23** in this release	Default or incorrect value is taken to be 2.23
TxType	Alphabetic Max 15 characters.	**CANCEL** only	Should be in capital letters
Vendor	Alphanumeric Max 15 characters.	Your unique Vendor Login Name Aa 0-9 - _	Used to authenticate your site. This should contain the Vendor Name supplied by Sage Pay when your account was created.
VendorTxCode	Alphanumeric Max 40 characters	The Vendor Transaction Code of the AUTHENTICATE transaction to be cancelled. Aa 0-9 {} . - _	This should be your own reference code to the original AUTHENTICATE transaction
VPSTxId	Alphanumeric 38 characters	The Transaction ID for the AUTHENTICATE transaction. {} Aa 0-9 -	As sent back by the Sage Pay system when the AUTHENTICATE transaction was registered.
SecurityKey	Alphanumeric 10 characters	Security Key for the AUTHENTICATE transaction Aa 0-9	The SecurityKey of the AUTHENTICATE transaction as sent back by the Sage Pay System when the transaction occurred.

A18: Cancel Authentication results

This is the plain text response part of the POST sent in A17. Encoding will be as Name=Value fields separated by carriage-return-linefeeds (CRLF).

Response format:

Name	Format	Values	Comments
VPSProtocol	Numeric. Fixed 4 characters.	**2.23** in this release	The current system version.
Status	Alphanumeric Max 15 characters.	**OK** – Process executed without error. The transaction was Cancelled successfully. **MALFORMED** – Input message was malformed – normally will only occur during development. The StatusDetail (next field) will give more information **INVALID** – Unable to authenticate you or find the transaction, or the data provided is invalid. See StatusDetail for more information. **ERROR** – Only returned if there is a problem at Sage Pay.	If the status is not OK, the StatusDetail field will give more information about the problem. Please notify Sage Pay if a Status report of ERROR is seen, together with your VendorTxCode and the StatusDetail text.
StatusDetail	Alphanumeric Max 255 char.	Human-readable text providing extra detail for the Status message.	

A19: Sage Pay System Full URL Summary

The tables below shows the complete set of web addresses (URLs) to which you send the messages detailed above.

RELEASE	
Simulator	https://test.sagepay.com/Simulator/VSPServerGateway.asp?Service=VendorReleaseTx
Test System	https://test.sagepay.com/gateway/service/release.vsp
Live System	https://live.sagepay.com/gateway/service/release.vsp

ABORT	
Simulator	https://test.sagepay.com/Simulator/VSPServerGateway.asp?Service=VendorAbortTx
Test System	https://test.sagepay.com/gateway/service/abort.vsp
Live System	https://live.sagepay.com/gateway/service/abort.vsp

REFUND	
Simulator	https://test.sagepay.com/Simulator/VSPServerGateway.asp?Service=VendorRefundTx
Test System	https://test.sagepay.com/gateway/service/refund.vsp
Live System	https://live.sagepay.com/gateway/service/refund.vsp

REPEAT	
Simulator	https://test.sagepay.com/Simulator/VSPServerGateway.asp?Service=VendorRepeatTx
Test System	https://test.sagepay.com/gateway/service/repeat.vsp
Live System	https://live.sagepay.com/gateway/service/repeat.vsp

VOID	
Simulator	https://test.sagepay.com/Simulator/VSPServerGateway.asp?Service=VendorVoidTx
Test System	https://test.sagepay.com/gateway/service/void.vsp
Live System	https://live.sagepay.com/gateway/service/void.vsp

MANUAL	
Simulator	Not supported in VSP Simulator at present
Test System	https://test.sagepay.com/gateway/service/manualpayment.vsp
Live System	https://live.sagepay.com/gateway/service/manualpayment.vsp

DIRECTREFUND	
Simulator	Not supported in VSP Simulator at present
Test System	https://test.sagepay.com/gateway/service/directrefund.vsp
Live System	https://live.sagepay.com/gateway/service/directrefund.vsp

AUTHORISE	
Simulator	https://test.sagepay.com/Simulator/VSPServerGateway.asp?Service=VendorAuthoriseTx
Test System	https://test.sagepay.com/gateway/service/authorise.vsp
Live System	https://live.sagepay.com/gateway/service/authorise.vsp

CANCEL	
Simulator	https://test.sagepay.com/Simulator/VSPServerGateway.asp?Service=VendorCancelTx
Test System	https://test.sagepay.com/gateway/service/cancel.vsp
Live System	https://live.sagepay.com/gateway/service/cancel.vsp

Please ensure that your firewalls allow outbound and inbound Port 443 (HTTPS only) access in order to communicate with our servers (on Simulator/Test/Live).