Secure XML API Integration Guide

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1 Introduction

1.1 About this Guide

This guide provides technical information about integrating and configuring SecurePay within your environment.

SecurePay uses XML request and response messages which can be run on any platform and in any programming language. The messages are transport is via HTTP over SSL.

This guide covers the process of building a program within your web site or application in order to integrate the XML API.

1.2 Intended Audience

This document is intended for developers, integrating SecurePay's SecureXML interface into their own applications or websites.

It is recommended that someone with web site, XML or application programming experience reads this guide and implements the SecureXML.

2 System Overview

SecurePay's Payment Gateway provides merchants with the ability to process credit card and direct entry payments in a secure environment.

Credit card payments are processed in real time, with any of the six major Australian banks. These banks are:

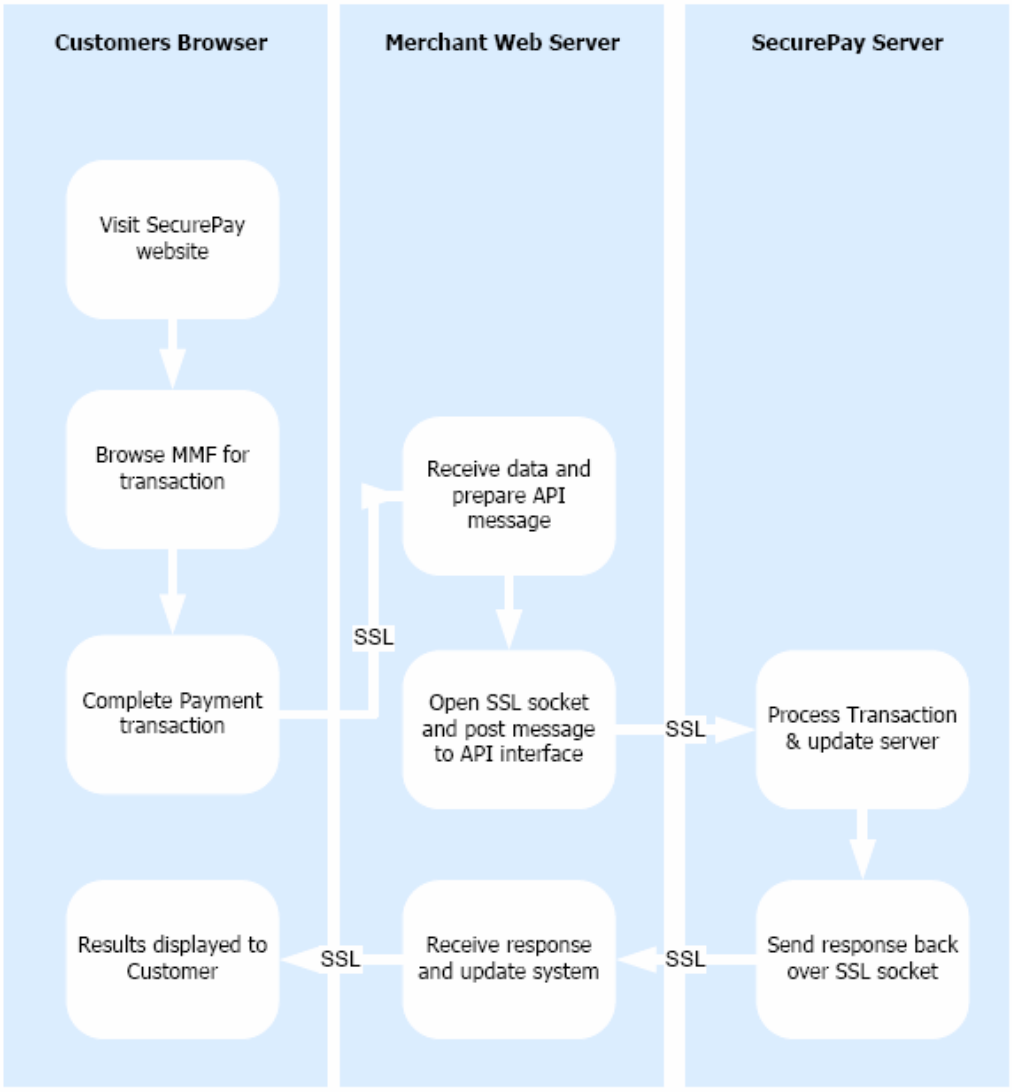
- Westpac (including Challenge Bank and Bank of Melbourne)
- Commonwealth Bank
- National Australia Bank
- St George (including Bank of SA)
- BankWest
- ANZ

Direct entry payments are not processed in real time; they are stored in SecurePay's database and processed daily at 4.30pm EST.

SecurePay provide various methods for customers to connect to our system, from hosted payment pages, IVR telephone access, POS applications, simple APIs, as well as platform independent XML interface allowing developers to build their own products to access SecurePay's Payment Server directly over an Internet connection using HTTP.

This interface, known as SecureXML, utilises XML request and response messages, and can be run on any platform and in any programming language. The message transport is done via HTTP protocol using SSL. Echo request messages are sent to check the availability of the Payment Gateway.

SecureXML supports five (5) credit card transaction types: payment, refund, reversal ("void"), preauthorise, and preauthorise complete ("advice") and two (2) direct entry transaction types: debit and credit.



3 Functionality

SecureXML is an independent platform to process financial transactions.

3.1 Payment

Payment requests are used to pass financial credit card transaction messages to SecurePay's Payment Server, which will authorise the transaction with the merchant's bank and customer's card issuer, and produce a response based on the banks' authorisation of the transaction.

The Payment request can be used to send following credit card transaction types:

- Credit Card Payment
- Credit Card Refund
- Credit Card Reversal (Void)
- Credit Card Preauthorise
- Credit Card Preauthorise Complete (Advice)

SecurePay's Payment Server is also capable of processing direct entry transactions. Direct entry transactions are not processed real time. SecurePay Payment Server stores direct entry transaction in a database and processes them daily at 4.30pm Melbourne time.

The Payment request can be used to send following direct entry transaction types:

- Direct Debit
- Direct Credit

3.2 Echo

The Echo requests are used to verify that the SecurePay Payment Server is available.

3.3 Authentication, Communication & Encryption

To ensure merchant security, each merchant is issued with password. This password must be authenticated before a request can be processed. This ensures that any unauthorised users will be unable to process payments on the merchant's behalf.

The password can be changed by the merchant via SecurePay's Merchant Management facility. *Refer to the SecurePay User Guide.*

SecureXML interface uses HTTP protocol and SSL for communication with SecurePay's Payment servers.

Merchants using SecureXML will have to use SecurePay's security certificate to encrypt requests and decrypt responses from SecurePay. When an SSL connection is negotiated between the client and the server, if the certificates presented do not match, or the certificate used is not present, has expired, or has been revoked, the connection will not be allowed.

4 XML Message Format and Contents

SecurePay's Payment Server Messages can take the following formats:

- Requests are the messages sent to SecurePay's Payment Server requesting periodic or triggered transactions.
- The Echo requests are used to verify that the SecurePay's Payment Server is available. For information on Echo messages Click Echo Message Elements.

4.1 XML Header

The XML document will begin with an XML declaration that contains the following data:

```
<?xml version="1.0" encoding="UTF-8"?>
```

Markup	Usage	Explanation
<?	required	Begins a processing instruction.
xml	required	Declares this to be an XML instruction.
Version=""	required	Identifies the version of XML specification in use.
Encoding=""	required	Indicates which international character set is used.
?>	required	Terminates the processing instruction.

The XML document must contain a following top level (root) element: <SecurePayMessage>

4.2 Element Definitions

4.2.1 Element Codes

The XML elements located in the Element matrices in sections below have the following definitions used to indicate whether the elements are present in the request and response messages:

Code	Condition
P	Present, the element is required in the message and must be present.
O	Optional, the element is not required in the message but may be present.
X	Not present, the element should not be present.

4.2.2 Element Types and Constraints

The value format descriptions in sections below use keys from the following table:

Type	Constraint	Description
String	A	• Alphabetic characters • Value in the element is valid if it only contains characters in the specified set (alphabetic)
	N	• Numeric characters • Value in the element is valid if it only contains characters in the specified set (numeric)
	S	• Special characters • Will be followed with a list of allowed characters • Value in the element is valid if it only contains characters in the specified set (special characters)

Type	Constraint	Description
	LEN	• Number of characters in the string • Value in the element is valid if the length of the value is equal to the defined length
	MINLEN	• Minimum number of characters in the string • Value in the element is valid if the length of the value is greater than or equal to the defined minimum length
	MAXLEN	• Maximum number of characters in the string • Value in the element is valid if the length of the value is less than or equal to the defined maximum length
Integer	DIGNO	• Number of digits in the integer value • Value in the element is valid if the number of digits in the value is less than or equal to the defined digits number
	MINVAL	• Minimum numerical value • Value in the element is valid if it is numerically greater than or equal to the defined minimum value
	MAXVAL	• Maximum numerical value • Value in the element is valid if it is numerically less than or equal to the defined maximum value

4.3 Sample XML Request and Response

4.3.1 Request

```
<?xml version="1.0" encoding="UTF-8"?>
<SecurePayMessage>
 <MessageInfo>
  <messageID>8af793f9af34bea0cf40f5fb5c630c</messageID>
  <messageTimestamp>20041803161306527000+660</messageTimestamp>
  <timeoutValue>60</timeoutValue>
  <apiVersion>xml-4.2</apiVersion>
 </MessageInfo>
 <MerchantInfo>
  <merchantID>ABC0001</merchantID>
  <password>changeit</password>
 </MerchantInfo>
 <RequestType>Payment</RequestType>
 <Payment>
  <TxnList count="1">
   <Txn ID="1">
    <txnType>0</txnType>
    <txnSource>0</txnSource>
    <amount>1000</amount>
    <purchaseOrderNo>test</purchaseOrderNo>
    <CreditCardInfo>
     <cardNumber>4444333322221111</cardNumber>
     <expiryDate>09/15</expiryDate>
    </CreditCardInfo>
   </Txn>
  </TxnList>
 </Payment>
</SecurePayMessage>
```

4.3.2 Response

```
<?xml version="1.0" encoding="UTF-8"?>
<SecurePayMessage>
 <MessageInfo>
  <messageID>8af793f9af34bea0cf40f5fb5c630c</messageID>
  <messageTimestamp>20041803161316316000+660</messageTimestamp>
  <apiVersion>xml-4.2</apiVersion>
 </MessageInfo>
 <RequestType>Payment</RequestType>
 <MerchantInfo>
  <merchantID>ABC0001</merchantID>
 </MerchantInfo>
 <Status>
  <statusCode>000</statusCode>
  <statusDescription>Normal</statusDescription>
 </Status>
 <Payment>
  <TxnList count="1">
   <Txn ID="1">
    <txnType>0</txnType>
    <txnSource>0</txnSource>
    <amount>1000</amount>
    <purchaseOrderNo>test</purchaseOrderNo>
    <approved>Yes</approved>
    <responseCode>00</responseCode>
    <responseText>Approved</responseText>
    <settlementDate>20040318</settlementDate>
    <txnID>009844</txnID>
    <CreditCardInfo>
     <pan>444433...111</pan>
     <expiryDate>09/15</expiryDate>
     <cardType>6</cardType>
     <cardDescription>Visa</cardDescription>
    </CreditCardInfo>
   </Txn>
  </TxnList>
 </Payment>
</SecurePayMessage>
```

5 Common XML Message Elements

5.1 Request Messages

Requests are the messages sent to SecurePay. Following sections describe elements common to all requests.

5.1.1 MessageInfo Element

Description: Identifies the message.
Format type: (No value)
Format constraints: (No value)
Validated by SecurePay: Yes
Value: (No value)
Sub-elements: Yes, see table below

`<MessageInfo>` sub-elements:

Element	Comments	
`<messageID>`	**Description:**	Unique identifier for the XML message.
	Format type:	String
	Format constraints:	AN, MINLEN = 0, MAXLEN = 30
	Validated by SecurePay:	Yes
	Value:	Eg: "8af793f9af34bea0cf40f5fb5c630c"
	Sub-elements:	No
`<messageTimestamp>`	**Description:**	Time of the request.
	Format type:	String, see Appendix E: Timestamp String Format
	Format constraints:	NS ('+', '-'), LEN = 24
	Validated by SecurePay:	Yes
	Value:	Eg: "20041803161306527000+660"
	Sub-elements:	No
`<timeoutValue>`	**Description:**	Timeout value used, in seconds.
	Format type:	Integer
	Format constraints:	DIGNO = 3, MINVAL = 1
	Validated by SecurePay:	Yes
	Value:	Recommended "60"
	Sub-elements:	No
`<apiVersion>`	**Description:**	Version of the product used.
	Format type:	String
	Format constraints:	ANS ('-', '.'), MINLEN = 1, MAXLEN = 13
	Validated by SecurePay:	Yes
	Value:	Always "xml-4.2"
	Sub-elements:	No

5.1.2 MerchantInfo Element

Description: Identifies the merchant.
Format type: (No value)
Format constraints: (No value)
Validated by SecurePay: Yes
Value: (No value)

Sub-elements: Yes, see table below

<MerchantInfo> sub-elements:

Element	Comments	
<merchantID>	**Description:**	Merchant ID. 5 or 7-character merchant ID supplied by SecurePay.
	Format type:	String
	Format constraints:	AN, LEN = 7
	Validated by SecurePay:	Yes
	Value:	5-character merchant ID for Direct Entry transactions, eg: "ABC00" 7-character merchant ID for Credit Card transactions, eg: "ABC0001"
	Sub-elements:	No
<password>	**Description:**	Payment password. Password used for authentication of the merchant's request message, supplied by SecurePay. **Note:** The password can be changed via SecurePay's Merchant Management facility.
	Format type:	String
	Format constraints:	ANS (All characters are allowed), MINLEN = 6, MAXLEN = 20
	Validated by SecurePay:	Yes
	Value:	Eg: "password_01"
	Sub-elements:	No

5.1.3 RequestType Element

Description: Defines the type of the request being processed.
Format type: String
Format constraints: A, MINLEN = 1, MAXLEN = 20
Validated by SecurePay: Yes
Value: One of the following:
- "Payment"
- "Echo"

Sub-elements: No

5.2 Response Messages

Responses are the messages sent from SecurePay to the merchant in a response to a request message. Following sections describe elements common to all responses.

5.2.1 MessageInfo Element

Description: Identifies the message.
Format type: (No value)
Format constraints: (No value)
Value: (No value)
Sub-elements: Yes, see table below

<MessageInfo> sub-elements:

Element	Comments	
<messageID>	**Description:**	Unique identifier for the XML message. Returned unchanged from the request.
	Format type:	String
	Format constraints:	AN, MINLEN = 0, MAXLEN = 30
	Value:	Eg: "8af793f9af34bea0cf40f5fb5c630c"
	Sub-elements:	No
<messageTimestamp>	**Description:**	Time of the response.
	Format type:	String, see Appendix E: Timestamp String Format
	Format constraints:	NS ('+', '-'), LEN = 24
	Value:	Eg: "20041803161306527000+660"
	Sub-elements:	No
<apiVersion>	**Description:**	Version of the product used. Returned unchanged from the request.
	Format type:	String
	Format constraints:	ANS ('-', '.'), MINLEN = 1, MAXLEN = 13
	Value:	Eg: "xml-4.2"
	Sub-elements:	No

5.2.2 *MerchantInfo Element*

Description: Identifies the merchant.
Format type: (No value)
Format constraints: (No value)
Value: (No value)
Sub-elements: Yes, see table below

<MerchantInfo> sub-elements:

Element	Comments	
<merchantID>	**Description:**	Merchant ID. 5 or 7-character merchant ID supplied by SecurePay. Returned unchanged from the request.
	Format type:	String
	Format constraints:	AN, LEN = 7
	Value:	5-character merchant ID for Direct Entry transactions, eg: "ABC00" 7-character merchant ID for Credit Card transactions, eg: "ABC0001"
	Sub-elements:	No

5.2.3 *RequestType Element*

Description: Defines the type of the request being processed.
Returned unchanged from the request.
Format type: String
Format constraints: A, MINLEN = 1, MAXLEN = 20
Value: One of the following:

- "Payment"
- "Echo"

Sub-elements: No

5.2.4 Status Element

Description:	Status of the processing of merchant's request.
Format type:	(No value)
Format constraints:	(No value)
Value:	(No value)
Sub-elements:	Yes, see table below

<Status> sub-elements:

Element	Comments	
<statusCode>	**Description:**	Status code.
	Format type:	String, see Appendix F: SecurePay Status Codes
	Format constraints:	N, LEN = 3
	Value:	Eg: "000"
	Sub-elements:	No
<statusDescription>	**Description:**	Status description.
	Format type:	String, see Appendix F: SecurePay Status Codes
	Format constraints:	ANS (All characters are allowed), MINLEN = 0, MAXLEN = 40
	Value:	Eg: "Normal"
	Sub-elements:	No

6 Payment Message Elements

6.1 Request Messages

Following sections describe elements used in Payment requests.

The following <RequestType> element value must be used for all Payment messages:

<RequestType>Payment</RequestType>

6.1.1 Payment Element

Description: Contains information about financial transactions to be processed.
Format type: (No value)
Format constraints: (No value)
Validated by SecurePay: Yes
Value: (No value)
Sub-elements: Yes, see table below

<Payment> sub-elements:

Element	Comments
<TxnList>	See TxnList Element

6.1.1.1 TxnList Element

Description: Contains list of transactions to be processed.
Format type: (No value)
Format constraints: (No value)
Validated by SecurePay: Yes
Value: (No value)
Attributes: Yes, see table below
Sub-elements: Yes, see table below

<TxnList> sub-elements:

Element	Comments	
<TxnList.count>	**Description:**	Transaction count is an attribute of <TxnList> element and specifies number of <Txn> elements. **Note:** Currently only single transactions per request are supported. Payments submitted with more than one <Txn> element will be rejected with Status code "577".
	Format type:	Integer
	Format constraints:	DIGNO = 1, MINVAL = 1, MAXVAL = 1
	Validated by SecurePay:	Yes
	Value:	Currently always "1"
	Sub-elements:	No
<Txn>	See Txn Element	

6.1.1.1.1 Txn Element

Description:	Contains information about a financial transaction.
Format type:	(No value)
Format constraints:	(No value)
Validated by SecurePay:	Yes
Value:	(No value)
Attributes:	Yes, see table below
Sub-elements:	Yes, see table below

<Txn> sub-elements:

Not all of the <Txn> sub-elements are required for different types of payments. Please refer to section Transaction Type-Required Element Map for information what elements are required for various payment types.

Element	Comments	
<Txn.ID>	**Description:**	Transaction ID is an attribute of <Txn> element and specifies transaction ID. All transactions should be numbered sequentially starting at "1". **Note:** Currently only single transactions per request are supported. Payments submitted with more than one <Txn> element will be rejected with Status code "577".
	Format type:	Integer
	Format constraints:	DIGNO = 1, MINVAL = 1, MAXVAL = 1
	Validated by SecurePay:	Yes
	Value:	Currently always "1"
	Sub-elements:	No
<txnType>	**Description:**	Transaction type specifies the type of transaction being processed.
	Format type:	Integer, see Appendix A: Transaction Types
	Format constraints:	DIGNO = 2, MINVAL = 0, MAXVAL = 99
	Validated by SecurePay:	Yes
	Value:	Eg: "0"
	Sub-elements:	No
<txnSource>	**Description:**	Transaction source specifies the source of transaction being processed. For SecureXML the source must always have a value "23".
	Format type:	Integer, see Appendix B: Transaction Sources
	Format constraints:	DIGNO = 2, MINVAL = 0, MAXVAL = 99
	Validated by SecurePay:	Yes
	Value:	Always "23"
	Sub-elements:	No
<amount>	**Description:**	Transaction amount in cents.
	Format type:	Integer
	Format constraints:	MINVAL = 1
	Validated by SecurePay:	Yes
	Value:	Eg: "123" for $1.23
	Sub-elements:	No

Element	Comments	
<currency>	**Description:**	Transaction currency. **Note:** Only applicable to Credit Card payments. Currency only needs to be set for payment and preauthorisation. Refund, Reversal and Complete transactions are processed in a currency used for the original payment or preauthorisation. If not set for payment or preauthorisation, a default currency is used. Default currency is "AUD" – Australian Dollars.
	Format type:	String
	Format constraints:	A, LEN = 3
	Validated by SecurePay:	Yes
	Value:	Eg: "AUD" for Australian Dollars
	Sub-elements:	No
<purchaseOrderNo>	**Description:**	Unique merchant transaction identifier, typically an invoice number. **Note:** Must be the same as <purchaseOrderNo> element of the original transaction when performing a refund, reversal or advice.
	Format type:	String
	Format constraints:	For Credit Card payments ANS (All characters allowed except spaces and "'" single quote), For Direct Entry payments EBCIDEC (see Appendix J: EBCIDEC Character Set), MINLEN = 1, MAXLEN = 60 For Direct Entry payments it is recommended that the purchase order number does not exceed 18 characters in length.
	Validated by SecurePay:	Yes
	Value:	Eg: "order_#000235"
	Sub-elements:	No
<txnID>	**Description:**	Bank transaction ID. **Note:** Must match the <txnID> element returned in the response to the original payment transaction when performing a refund or reversal.
	Format type:	String
	Format constraints:	AN, MINLEN = 6, MAXLEN = 16
	Validated by SecurePay:	Yes
	Value:	Eg: "TX123456"
	Sub-elements:	No
<preauthID>	**Description:**	Authorisation code of a preauthorisation transaction. **Note:** Must match the <preauthID> element returned in the response to the original preauthorisation transaction when performing an advice.
	Format type:	String
	Format constraints:	N, LEN = 6
	Validated by SecurePay:	Yes
	Value:	Eg: "123456"
	Sub-elements:	No
<CreditCardInfo>	See CreditCardInfo Element	
<DirectEntryInfo>	See DirectEntryInfo Element	

6.1.1.1.2 CreditCardInfo Element

Description: Contains credit card information.
Format type: (No value)
Format constraints: (No value)
Validated by SecurePay: Yes
Value: (No value)
Sub-elements: Yes, see table below

<CreditCardInfo> sub-elements:

Element	Comments	
<cardNumber>	**Description:**	Credit card number.
	Format type:	String
	Format constraints:	N, MINLEN = 13, MAXLEN = 16
	Validated by SecurePay:	Yes
	Value:	Eg: "4242424242424242"
	Sub-elements:	No
<cvv>	**Description:**	Card verification value. The CVV value assists the bank with detecting fraudulent transactions based on automatically generated card numbers, as the CVV number is printed on the physical card and cannot be generated in conjunction with a card number. If passed, the bank may check the supplied value against the value recorded against the card. See Appendix D: Location of CVV
	Format type:	String
	Format constraints:	N, MINLEN = 3, MAXLEN = 4
	Validated by SecurePay:	Yes
	Value:	Eg: "123"
	Sub-elements:	No
<expiryDate>	**Description:**	Credit card expiry date.
	Format type:	String
	Format constraints:	NS ('/'), LEN = 5
	Validated by SecurePay:	Yes
	Value:	Eg: "05/06" for May 2006
	Sub-elements:	No

6.1.1.1.3 DirectEntryInfo Element

Description: Contains direct entry information.
Format type: (No value)
Format constraints: (No value)
Validated by SecurePay: Yes
Value: (No value)
Sub-elements: Yes, see table below

<DirectEntryInfo> sub-elements:

Element	Comments

<bsbNumber>	**Description:**	BSB number.
	Format type:	String
	Format constraints:	N, LEN = 6
	Validated by SecurePay:	Yes
	Value:	Eg: "012012"
	Sub-elements:	No
<accountNumber>	**Description:**	Account number.
	Format type:	String
	Format constraints:	N, MINLEN = 1, MAXLEN = 9
	Validated by SecurePay:	Yes
	Value:	Eg: "00123"
	Sub-elements:	No
<accountName>	**Description:**	Account name.
	Format type:	String
	Format constraints:	EBCIDEC (see Appendix J: EBCIDEC Character Set), MINLEN = 0, MAXLEN = 32
	Validated by SecurePay:	Yes
	Value:	Eg: "John Smith"
	Sub-elements:	No

6.1.1.1.4 Transaction Type-Required Element Map

The table below shows which elements are required for each credit card transaction type. Elements are mandatory, optional or not required.

TXN TYPE / ELEMENT	Standard Payment	Refund	Reversal	Preauthorise	Complete (Advice)
	0	4	6	10	11
<txnType>	M	M	M	M	M
<txnSource>	M	M	M	M	M
<amount>	M	M	M	M	M
<currency>	O	X	X	O	X
<purchaseOrderNo>	M	M	M	M	M
<txnID>	X	M	M	X	X
<preauthID>	X	X	X	X	M
<cardNumber>	M	O	O	O	M
<cvv>	O	O	O	O	O
<expiryDate>	M	O	O	O	M

M – Mandatory
O – Optional
X – Not required (ignored)

The table below shows which elements are required for each direct entry transaction type. Elements are mandatory, optional or not required.

TXN TYPE	Direct Debit	Preauthorise Complete (Advice)

ELEMENT	15	17
<txnType>	M	M
<txnSource>	M	M
<amount>	M	M
<currency>	X	X
<purchaseOrderNo>	M	M
<txnID>	X	X
<preauthID>	X	X
<bsbNumber>	M	M
<accountNumber>	M	M
<accountName>	M	M
M – Mandatory **O** – Optional **X** – Not required (ignored)		

6.2 Response Messages

Following sections describe elements used in Payment requests. The following elements will only be returned if Status received in the response is "000 – Normal".

6.2.1 Payment Element

Description: Contains information about financial transactions processed.
Format type: (No value)
Format constraints: (No value)
Value: (No value)
Sub-elements: Yes, see table below

<Payment> sub-elements:

Element	Comments
<TxnList>	See TxnList Element

6.2.1.1 TxnList Element

Description: Contains list of transactions processed.
Format type: (No value)
Format constraints: (No value)
Value: (No value)
Attributes: Yes, see table below
Sub-elements: Yes, see table below

<TxnList> sub-elements:

Element	Comments

<TxnList.count>	**Description:**	Transaction count is an attribute of <TxnList> element and specifies number of <Txn> elements. Returned unchanged from the request. **Note:** Currently only single transactions per request are supported. Payments submitted with more than one <Txn> element will be rejected with Status code "577".
	Format type:	Integer
	Format constraints:	DIGNO = 1, MINVAL = 1, MAXVAL = 1
	Value:	Currently always "1"
	Sub-elements:	No
<Txn>	See Txn Element	

6.2.1.1.1 Txn Element

Description:	Contains information about a financial transaction.
Format type:	(No value)
Format constraints:	(No value)
Value:	(No value)
Attributes:	Yes, see table below
Sub-elements:	Yes, see table below

<Txn> sub-elements:

Element	Comments	
<Txn.ID>	**Description:**	Transaction ID is an attribute of <Txn> element and specifies transaction ID. All transactions returned should be numbered sequentially starting at "1" just as they were in the request message. Returned unchanged from the request. **Note:** Currently only single transactions per request are supported. Payments submitted with more than one <Txn> element will be rejected with Status code "577".
	Format type:	Integer
	Format constraints:	DIGNO = 1, MINVAL = 1, MAXVAL = 1
	Value:	Currently always "1"
	Sub-elements:	No
<txnType>	**Description:**	Transaction type specifies the type of transaction processed. Returned unchanged from the request.
	Format type:	Integer, see Appendix A: Transaction Types
	Format constraints:	DIGNO = 2, MINVAL = 0, MAXVAL = 99
	Value:	Eg: "0"
	Sub-elements:	No
<txnSource>	**Description:**	Transaction source specifies the source of transaction processed. Returned unchanged from the request.
	Format type:	Integer, see Appendix B: Transaction Sources
	Format constraints:	DIGNO = 2, MINVAL = 0, MAXVAL = 99
	Value:	Eg: "23"
	Sub-elements:	No

Element	Comments	
<amount>	**Description:**	Transaction amount in cents. Returned unchanged from the request.
	Format type:	Integer
	Format constraints:	MINVAL = 1
	Value:	Eg: "123" for $1.23
	Sub-elements:	No
<currency>	**Description:**	Transaction currency. Returned unchanged from the request. If not set in the request, a default value of "AUD" is returned. **Note:** Only applicable to Credit Card payments.
	Format type:	String
	Format constraints:	A, LEN = 3
	Validated by SecurePay:	Yes
	Value:	Eg: "AUD" for Australian Dollars
	Sub-elements:	No
<purchaseOrderNo>	**Description:**	Unique merchant transaction identifier, typically an invoice number. For refunds, reversals and advice transactions the purchase order number returned in response is the bank transaction ID of the original transaction. For payments and preauthorise transactions this value is returned unchanged from the request.
	Format type:	String
	Format constraints:	For Credit Card payments ANS (All characters allowed except spaces and "'" single quote), For Direct Entry payments EBCIDEC (see Appendix J: EBCIDEC Character Set), MINLEN = 1, MAXLEN = 60
	Value:	Eg: "order_#000235"
	Sub-elements:	No
<approved>	**Description:**	Indicates whether the transaction processed has been approved or not.
	Format type:	String
	Format constraints:	A, MINLEN = 2, MAXLEN = 3
	Value:	Always "Yes" or "No"
	Sub-elements:	No
<responseCode>	**Description:**	Response code of the transaction. Either a 2-digit bank response or a 3-digit SecurePay/Gateway response. Element <responseText> provides more information in a textual format. Refer to SecurePay Payment Response Codes documents for details of codes returned. This document may be downloaded from SecurePay's Merchant Login website or provided via email by SecurePay's Merchant Support team.
	Format type:	String
	Format constraints:	AN, MINLEN = 2, MAXLEN = 3
	Value:	Eg: "00"
	Sub-elements:	No
<responseText>	**Description:**	Textual description of the response code received.
	Format type:	String
	Format constraints:	ANS (All characters allowed), MINLEN = 0, MAXLEN = 40
	Value:	Eg: "Approved"
	Sub-elements:	No

Element	Comments	
<settlementDate>	**Description:**	Bank settlement date when the funds will be settled into the merchant's account. This will be the current date mostly, however after the bank's daily cut-off time, or on non-banking days, the settlement date will be the next business day. Will not be returned if the bank did not receive the transaction. (A settlement date may be returned for declined transactions.)
	Format type:	String
	Format constraints:	N, LEN = 8
	Value:	Eg: "20040326" for 26th March 2004
	Sub-elements:	No
<txnID>	**Description:**	Bank transaction ID. Will not be returned if the transaction has not been processed or in some cases if it was not received by the bank.
	Format type:	String
	Format constraints:	AN, MINLEN = 6, MAXLEN = 16
	Value:	Eg: "TX123456"
	Sub-elements:	No
<preauthID>	**Description:**	Authorisation code of a preauthorisation transaction. Will not be returned if the transaction is not a Preauthorisation or has not been processed or in some cases if the preauthorisation was not received by the bank.
	Format type:	String
	Format constraints:	N, LEN = 6
	Value:	Eg: "123456"
	Sub-elements:	No
<CreditCardInfo>	See CreditCardInfo Element	
<DirectEntryInfo>	See DirectEntryInfo Element	

6.2.1.1.2 CreditCardInfo Element

Description: Contains credit card information.
Format type: (No value)
Format constraints: (No value)
Value: (No value)
Sub-elements: Yes, see table below

<CreditCardInfo> sub-elements:

Element	Comments	
<pan>	**Description:**	Truncated credit card number. Contains first 6 digits of the card number, followed by "..." and then last 3 digits of the card number. Will not be returned for transactions with invalid credit card number.
	Format type:	String
	Format constraints:	N, LEN = 12
	Value:	Eg: "424242...242"
	Sub-elements:	No

Element	Comments	
<expiryDate>	**Description:**	Credit card expiry date. Returned unchanged from the request.
	Format type:	String
	Format constraints:	NS ('/'), LEN = 5
	Value:	Eg: "05/06" for May 2006
	Sub-elements:	No
<cardType>	**Description:**	Card type used. Will not be returned for transactions with invalid credit card number.
	Format type:	Integer, see Appendix C: Card Types
	Format constraints:	DIGNO = 1
	Value:	Eg: "6" for Visa cards
	Sub-elements:	No
<cardDescription>	**Description:**	Card description. Will not be returned for transactions with invalid credit card number.
	Format type:	String, see Appendix C: Card Types
	Format constraints:	A, MINLEN = 0, MAXLEN = 20
	Value:	Eg: "Visa"
	Sub-elements:	No

6.2.1.1.3 DirectEntryInfo Element

Description: Contains direct entry information.
Format type: (No value)
Format constraints: (No value)
Validated by SecurePay: Yes
Value: (No value)
Sub-elements: Yes, see table below

<DirectEntryInfo> sub-elements:

Element	Comments	
<bsbNumber>	**Description:**	BSB number. May not be returned for invalid transactions.
	Format type:	String
	Format constraints:	N, LEN = 6
	Validated by SecurePay:	Yes
	Value:	Eg: "012012"
	Sub-elements:	No
<accountNumber>	**Description:**	Account number. May not be returned for invalid transactions.
	Format type:	String
	Format constraints:	N, MINLEN = 1, MAXLEN = 9
	Validated by SecurePay:	Yes
	Value:	Eg: "00123"
	Sub-elements:	No

<accountName>	**Description:**	Account name. May not be returned for invalid transactions.
	Format type:	String
	Format constraints:	EBCIDEC (see Appendix J: EBCIDEC Character Set), MINLEN = 0, MAXLEN = 32
	Validated by SecurePay:	Yes
	Value:	Eg: "John Smith"
	Sub-elements:	No

6.3 Sample XML Messages

6.3.1 Credit Card Payment

6.3.1.1 Request

```
<?xml version="1.0" encoding="UTF-8"?>
<SecurePayMessage>
 <MessageInfo>
  <messageID>8af793f9af34bea0cf40f5fb750f64</messageID>
  <messageTimestamp>20042303111214383000+660</messageTimestamp>
  <timeoutValue>60</timeoutValue>
  <apiVersion>xml-4.2</apiVersion>
 </MessageInfo>
 <MerchantInfo>
  <merchantID>ABC0001</merchantID>
  <password>changeit</password>
 </MerchantInfo>
 <RequestType>Payment</RequestType>
 <Payment>
  <TxnList count="1">
   <Txn ID="1">
    <txnType>0</txnType>
    <txnSource>23</txnSource>
    <amount>200</amount>
    <currency>AUD</currency>
    <purchaseOrderNo>test</purchaseOrderNo>
    <CreditCardInfo>
     <cardNumber>4444333322221111</cardNumber>
     <expiryDate>09/15</expiryDate>
    </CreditCardInfo>
   </Txn>
  </TxnList>
 </Payment>
</SecurePayMessage>
```

6.3.1.2 Response

```
<?xml version="1.0" encoding="UTF-8"?>
<SecurePayMessage>
 <MessageInfo>
  <messageID>8af793f9af34bea0cf40f5fb750f64</messageID>
  <messageTimestamp>20042303111226938000+660</messageTimestamp>
  <apiVersion>xml-4.2</apiVersion>
 </MessageInfo>
 <MerchantInfo>
  <merchantID>ABC0001</merchantID>
```

```
 </MerchantInfo>
 <RequestType>Payment</RequestType>
 <Status>
  <statusCode>000</statusCode>
  <statusDescription>Normal</statusDescription>
 </Status>
 <Payment>
  <TxnList count="1">
   <Txn ID="1">
    <txnType>0</txnType>
    <txnSource>23</txnSource>
    <amount>200</amount>
    <currency>AUD</currency>
    <purchaseOrderNo>test</purchaseOrderNo>
    <approved>Yes</approved>
    <responseCode>00</responseCode>
    <responseText>Approved</responseText>
    <settlementDate>20040323</settlementDate>
    <txnID>009887</txnID>
    <CreditCardInfo>
     <pan>444433...111</pan>
     <expiryDate>09/15</expiryDate>
     <cardType>6</cardType>
     <cardDescription>Visa</cardDescription>
    </CreditCardInfo>
   </Txn>
  </TxnList>
 </Payment>
</SecurePayMessage>
```

6.3.2 Credit Card Refund

6.3.2.1 Request

```
<?xml version="1.0" encoding="UTF-8"?>
<SecurePayMessage>
 <MessageInfo>
  <messageID>8af793f9af34bea0cf40f5fb7510fd</messageID>
  <messageTimestamp>20042303111359163000+660</messageTimestamp>
  <timeoutValue>60</timeoutValue>
  <apiVersion>xml-4.2</apiVersion>
 </MessageInfo>
 <MerchantInfo>
  <merchantID>ABC0001</merchantID>
  <password>changeit</password>
 </MerchantInfo>
 <RequestType>Payment</RequestType>
 <Payment>
  <TxnList count="1">
   <Txn ID="1">
    <txnType>4</txnType>
    <txnSource>23</txnSource>
    <amount>200</amount>
    <purchaseOrderNo>test</purchaseOrderNo>
    <txnID>009887</txnID>
    <CreditCardInfo>
     <cardNumber>4444333322221111</cardNumber>
```

```
     <expiryDate>09/15</expiryDate>
    </CreditCardInfo>
   </Txn>
  </TxnList>
 </Payment>
</SecurePayMessage>
```

6.3.2.2 Response

```
<?xml version="1.0" encoding="UTF-8"?>
<SecurePayMessage>
 <MessageInfo>
  <messageID>8af793f9af34bea0cf40f5fb7510fd</messageID>
  <messageTimestamp>20042303111409395000+660</messageTimestamp>
  <apiVersion>xml-4.2</apiVersion>
 </MessageInfo>
 <MerchantInfo>
  <merchantID>ABC0001</merchantID>
 </MerchantInfo>
 <RequestType>Payment</RequestType>
 <Status>
  <statusCode>000</statusCode>
  <statusDescription>Normal</statusDescription>
 </Status>
 <Payment>
  <TxnList count="1">
   <Txn ID="1">
    <txnType>4</txnType>
    <txnSource>23</txnSource>
    <amount>200</amount>
    <currency>AUD</currency>
    <purchaseOrderNo>009887</purchaseOrderNo>
    <approved>Yes</approved>
    <responseCode>00</responseCode>
    <responseText>Approved</responseText>
    <settlementDate>20040323</settlementDate>
    <txnID>009890</txnID>
    <CreditCardInfo>
     <pan>444433...111</pan>
     <expiryDate>09/15</expiryDate>
     <cardType>6</cardType>
     <cardDescription>Visa</cardDescription>
    </CreditCardInfo>
   </Txn>
  </TxnList>
 </Payment>
</SecurePayMessage>
```

6.3.3 Direct Debit

6.3.3.1 Request

```
<?xml version="1.0" encoding="UTF-8"?>
<SecurePayMessage>
 <MessageInfo>
  <messageID>8af793f9af34bea0cf40f5fb750f64</messageID>
  <messageTimestamp>20042303111214383000+660</messageTimestamp>
```

```
  <timeoutValue>60</timeoutValue>
  <apiVersion>xml-4.2</apiVersion>
 </MessageInfo>
 <MerchantInfo>
  <merchantID>ABC00</merchantID>
  <password>changeit</password>
 </MerchantInfo>
 <RequestType>Payment</RequestType>
 <Payment>
  <TxnList count="1">
   <Txn ID="1">
    <txnType>15</txnType>
    <txnSource>23</txnSource>
    <amount>200</amount>
    <purchaseOrderNo>test</purchaseOrderNo>
    <DirectEntryInfo>
     <bsbNumber>123123</bsbNumber>
     <accountNumber>0012345</accountNumber>
     <accountName>John Citizen</accountName>
    </DirectEntryInfo>
   </Txn>
  </TxnList>
 </Payment>
</SecurePayMessage>
```

6.3.3.2 Response

```
<?xml version="1.0" encoding="UTF-8"?>
<SecurePayMessage>
 <MessageInfo>
  <messageID>8af793f9af34bea0cf40f5fb750f64</messageID>
  <messageTimestamp>20042303111226938000+660</messageTimestamp>
  <apiVersion>xml-4.2</apiVersion>
 </MessageInfo>
 <MerchantInfo>
  <merchantID>ABC00</merchantID>
 </MerchantInfo>
 <RequestType>Payment</RequestType>
 <Status>
  <statusCode>000</statusCode>
  <statusDescription>Normal</statusDescription>
 </Status>
 <Payment>
  <TxnList count="1">
   <Txn ID="1">
    <txnType>15</txnType>
    <txnSource>23</txnSource>
    <amount>200</amount>
    <purchaseOrderNo>test</purchaseOrderNo>
    <approved>Yes</approved>
    <responseCode>00</responseCode>
    <responseText>Transaction Accepted</responseText>
    <settlementDate>20040323</settlementDate>
    <txnID>009887</txnID>
    <DirectEntryInfo>
     <bsbNumber>123123</bsbNumber>
     <accountNumber>0012345</accountNumber>
```

```
        <accountName>John Citizen</accountName>
       </DirectEntryInfo>
      </Txn>
     </TxnList>
    </Payment>
   </SecurePayMessage>
```

7 Payment URLs

The Payment messages must be sent to the following URLs.

For credit card transactions:

Test URL: https://www.securepay.com.au/test/payment

Live URL: https://www.securepay.com.au/xmlapi/payment

For direct entry transactions:

Test URL: https://www.securepay.com.au/test/directentry

Live URL: https://www.securepay.com.au/xmlapi/directentry

8 Echo Message Elements

8.1 Request Messages

Echo requests do not have any additional elements.

The following <RequestType> element value must be used for all Echo messages:
<RequestType>Echo</RequestType>

SecurePay recommends that the Echo messages should not be sent more often than every 5 minutes and only if there were no real transactions processed in the last 5 minutes.

8.2 Response Messages

Echo responses do not return any additional elements. The <Status> element will return a response code "000" if the service is available.

8.3 Echo URLs

Echo requests can be sent to any of the Payment URLs to verify if the service is available. The Status Code returned in the Echo response will be "000" if the service is up.

8.4 Sample XML Messages

8.4.1 Echo

8.4.1.1 Request

```
<?xml version="1.0" encoding="UTF-8"?>
<SecurePayMessage>
 <MessageInfo>
  <messageID>8af793f9af34bea0cf40f5fb79f383</messageID>
  <messageTimestamp>20042403095953349000+660</messageTimestamp>
  <timeoutValue>60</timeoutValue>
  <apiVersion>xml-4.2</apiVersion>
 </MessageInfo>
 <MerchantInfo>
  <merchantID>ABC0001</merchantID>
  <password>changeit</password>
 </MerchantInfo>
 <RequestType>Echo</RequestType>
</SecurePayMessage>
```

8.4.1.2 Response

```
<?xml version="1.0" encoding="UTF-8"?>
<SecurePayMessage>
 <MessageInfo>
  <messageID>8af793f9af34bea0cf40f5fb79f383</messageID>
```

```
    <messageTimestamp>20042403095956732000+660</messageTimestamp>
    <apiVersion>xml-4.2</apiVersion>
   </MessageInfo>
   <MerchantInfo>
    <merchantID>ABC0001</merchantID>
   </MerchantInfo>
   <RequestType>Echo</RequestType>
   <Status>
    <statusCode>000</statusCode>
    <statusDescription>Normal</statusDescription>
   </Status>
  </SecurePayMessage>
```

9 XML Over HTTP

The structure of the HTTP request and response messages will conform to the HTTP 1.1 network protocol. Below are examples of the expected HTTP exchange.

> *The HTTP communication between the client and SecurePay Payment Server must be done via SSL socket so that the sensitive information included in the request and response messages is encrypted.*

9.1 Request

```
POST /test/payment HTTP/1.1
host: www.securepay.com.au
content-type: text/xml
content-length: 677

<?xml version="1.0" encoding="UTF-
8"?><SecurePayMessage><MessageInfo><messageID>8af793f9af34bea0cf40f5fc011e0
c</messageID><messageTimestamp>20041904145505116000+600</messageTimestamp><
timeoutValue>60</timeoutValue><apiVersion>xml-
4.2</apiVersion></MessageInfo><MerchantInfo><merchantID>abc0001</merchantID
><password>abc123</password></MerchantInfo><RequestType>Payment</RequestTyp
e><Payment><TxnList count="1"><Txn
ID="1"><txnType>0</txnType><txnSource>23</txnSource><amount>200</amount><pu
rchaseOrderNo>test</purchaseOrderNo><CreditCardInfo><cardNumber>42424242424
24242</cardNumber><expiryDate>07/06</expiryDate></CreditCardInfo></Txn></Tx
nList></Payment></SecurePayMessage>
```

9.2 Response

The initial HTTP server response (100 continue) is to indicate that the request has been received and should be ignored. The 200 response should follow with the XML response message. If content length is 0 and no XML response is included then the request could not be understood and no response was produced.

```
HTTP/1.1 100 Continue
Server: Microsoft-IIS/5.0
Date: Mon, 19 Apr 2004 06:19:48 GMT
HTTP/1.1 200 OK
Server: Microsoft-IIS/5.0
Date: Mon, 19 Apr 2004 06:20:01 GMT
Content-Type: text/xml;charset=ISO-8859-1
Content-Length: 929

<?xml version="1.0" encoding="UTF-8"?>
<SecurePayMessage><MessageInfo><messageID>8af793f9af34bea0cf40f5fc011e0c</m
essageID><messageTimestamp>20041904161959849000+600</messageTimestamp><apiV
ersion>xml-
4.2</apiVersion></MessageInfo><RequestType>Payment</RequestType><MerchantIn
fo><merchantID>ABC0001</merchantID></MerchantInfo><Status><statusCode>000</
statusCode><statusDescription>Normal</statusDescription></Status><Payment><
TxnList count="1"><Txn
ID="1"><txnType>0</txnType><txnSource>23</txnSource><amount>200</amount><cu
rrency>AUD</currency><purchaseOrderNo>test</purchaseOrderNo><approved>Yes</
approved><responseCode>00</responseCode><responseText>Approved</responseTex
t><settlementDate>20040419</settlementDate><txnID>009729</txnID><CreditCard
Info><pan>424242...242</pan><expiryDate>07/06</expiryDate><cardType>6</card
Type><cardDescription>Visa</cardDescription></CreditCardInfo></Txn></TxnLis
t></Payment></SecurePayMessage>
```

Appendix A: Transaction Types

Transaction type codes define the type of financial transaction processed by SecurePay.

Codes with **shaded background** are permitted in Payment transactions processed using SecureXML. All other codes are provided for completeness.

Code	Description
0	**Standard Payment**
1	Mobile Payment
2	Batch Payment
3	Periodic Payment
4	**Refund**
5	Error Reversal (Void)
6	**Client Reversal (Void)**
10	**Preauthorise**
11	**Preauth Complete (Advice)**
14	Recurring Payment
15	**Direct Entry Debit**
17	**Direct Entry Credit**
19	Card-Present Payment
20	IVR Payment

Appendix B: Transaction Sources

Transaction source codes track the origin of financial transaction processed by SecurePay.

Codes with **shaded background** are permitted in Payment transactions processed using SecureXML. All other codes are provided for completeness.

Code	Description
0	Unknown
1	SecureLink
2	Merchant Login
3	SATM
4	SecureBill Portal
5	SecureBill Link
6	Reserved
7	SecurePOS
8	API (SecureJava)
9	Call Centre Payment Switch
10	Batch Server
11	IVR1
12	IVR2
13	SecureMobile
14	Reconciliation Engine
15	Reserved
16	Helpdesk Login
18	eSec Client
19	Periodic Server
20	Reserved
21	Reserved
22	Reserved
23	**XML**
90	Reserved

Appendix C: Card Types

SecurePay uses numeric codes to refer to credit card types in our system.

Code	Description
0	Unknown
1	JCB
2	American Express (Amex)
3	Diners Club
4	Bankcard
5	MasterCard
6	Visa

Appendix D: Location of CVV

The Card Verification Value is an anti-fraud measure used by some banks to prevent payments from generated card numbers. The CVV number is printed on the physical card, and is randomly assigned, therefore cannot be auto-generated.

The CVV number can be found in the following places:

Card Type	Location
Visa	Signature strip on back of card. Last digits of card number are re-printed in reverse italics, followed by 3-digit CVV.
MasterCard	Signature strip on back of card. Last digits of card number are re-printed in reverse italics, followed by 3-digit CVV.
Bankcard	Signature strip on back of card. Last digits of card number are re-printed in reverse italics, followed by 3-digit CVV.
Amex	4 digit CVV above card number on front of card.
Diners Club	Signature strip on back of card. Last digits of card number are re-printed in reverse italics, followed by 3-digit CVV.
JCB	Not used

Appendix E: Timestamp String Format

The format of the Timestamp or Log Time strings returned by SecureJava is:

YYYYDDMMHHNNSSKKK000sOOO

where:

- YYYY is a 4-digit year
- DD is a 2-digit zero-padded day of month
- MM is a 2-digit zero-padded month of year (January = 01)
- HH is a 2-digit zero-padded hour of day in 24-hour clock format (midnight =0)
- NN is a 2-digit zero-padded minute of hour
- SS is a 2-digit zero-padded second of minute
- KKK is a 3-digit zero-padded millisecond of second
- 000 is a Static 0 characters, as SecurePay does not store nanoseconds
- sOOO is a Time zone offset, where *s* is "+" or "-", and OOO = minutes, from GMT.

E.g. June 24, 2002 5:12:16.789 PM, Australian EST is:

20022406171216789000+600

Appendix F: SecurePay Status Codes

Status Code	Response Text	Description
000	Normal	Message processed correctly (check transaction response for details).
504	Invalid Merchant ID	If Merchant ID does not follow the format XXXDDDD, where X is a letter and D is a digit, or Merchant ID is not found in SecurePay's database.
505	Invalid URL	The URL passed to either Echo, Query, or Payment object is invalid.
510	Unable To Connect To Server	Produced by SecurePay Client API when unable to establish connection to SecurePay Payment Gateway
511	Server Connection Aborted During Transaction	Produced by SecurePay Client API when connection to SecurePay Payment Gateway is lost after the payment transaction has been sent
512	Transaction timed out By Client	Produced by SecurePay Client API when no response to payment transaction has been received from SecurePay Payment Gateway within predefined time period (default 80 seconds)
513	General Database Error	Unable to read information from the database.
514	Error loading properties file	Payment Gateway encountered an error while loading configuration information for this transaction
515	Fatal Unknown Error	Transaction could not be processed by the Payment Gateway due to unknown reasons
516	Request type unavailable	SecurePay system doesn't support the requested transaction type
517	Message Format Error	SecurePay Payment Gateway couldn't correctly interpret the transaction message sent
524	Response not received	The client could not receive a response from the server.
545	System maintenance in progress	The system maintenance is in progress and the system is currently unable to process transactions
550	Invalid password	The merchant has attempted to process a request with an invalid password.
575	Not implemented	This functionality has not yet been implemented
577	Too Many Records for Processing	The maximum number of allowed events in a single message has been exceeded.
580	Process method has not been called	The process() method on either Echo, Payment or Query object has not been called
595	Merchant Disabled	SecurePay has disabled the merchant and the requests from this merchant will not be processed.

Appendix G: XML Request DTD

```
<!ELEMENT SecurePayMessage (MessageInfo, MerchantInfo, RequestType
    Payment?)>

<!-- define elements for SecurePayMessage -->
<!ELEMENT MessageInfo (messageID, messageTimestamp, timeoutValue, apiVersion)>
<!ELEMENT MerchantInfo (merchantID, password)>
<!ELEMENT RequestType (#PCDATA)>
<!ELEMENT Payment (TxnList)>

<!-- define elements for MessageInfo -->
<!ELEMENT messageID (#PCDATA)>
<!ELEMENT messageTimestamp (#PCDATA)>
<!ELEMENT timeoutValue (#PCDATA)>
<!ELEMENT apiVersion (#PCDATA)>

<!-- define elements for MerchantInfo -->
<!ELEMENT merchantID (#PCDATA)>
<!ELEMENT password (#PCDATA)>

<!-- define elements for Payment -->
<!ELEMENT TxnList (Txn)>
<!ATTLIST TxnList
    count CDATA #REQUIRED>

<!-- define elements for TxnList -->
<!ELEMENT Txn (txnType, txnSource, amount, currency, purchaseOrderNo, txnID?,
    preauthID?, CreditCardInfo)>
<!ATTLIST Txn
    ID CDATA #REQUIRED>

<!-- define elements for Txn -->
<!ELEMENT txnType (#PCDATA)>
<!ELEMENT txnSource (#PCDATA)>
<!ELEMENT amount (#PCDATA)>
<!ELEMENT currency (#PCDATA)>
<!ELEMENT purchaseOrderNo (#PCDATA)>
<!ELEMENT txnID (#PCDATA)>
<!ELEMENT preauthID (#PCDATA)>
<!ELEMENT CreditCardInfo (cardNumber, cvv?, expiryDate?)>
<!ELEMENT DirectEntryInfo (bsbNumber, accountNumber, accountName)>

<!-- define elements for CreditCardInfo -->
<!ELEMENT cardNumber (#PCDATA)>
<!ELEMENT cvv (#PCDATA)>
<!ELEMENT expiryDate (#PCDATA)>

<!-- define elements for DirectEntryInfo -->
<!ELEMENT bsbNumber (#PCDATA)>
<!ELEMENT accountNumber (#PCDATA)>
<!ELEMENT accountName (#PCDATA)>
```

Appendix H: XML Response DTD

```
<!ELEMENT SecurePayMessage (MessageInfo, MerchantInfo, RequestType,
    Status, Payment)>

<!-- define elements for SecurePayMessage -->
<!ELEMENT MessageInfo (messageID, messageTimestamp, apiVersion)>
<!ELEMENT MerchantInfo (merchantID)>
<!ELEMENT RequestType (#PCDATA)>
<!ELEMENT Status (statusCode, statusDescription)>
<!ELEMENT Payment (TxnList)>

<!-- define elements for MessageInfo -->
<!ELEMENT messageID (#PCDATA)>
<!ELEMENT messageTimestamp (#PCDATA)>
<!ELEMENT apiVersion (#PCDATA)>

<!-- define elements for MerchantInfo -->
<!ELEMENT merchantID (#PCDATA)>

<!-- define elements for Status -->
<!ELEMENT statusCode (#PCDATA)>
<!ELEMENT statusDescription (#PCDATA)>

<!-- define elements for Payment -->
<!ELEMENT TxnList (Txn*)>
<!ATTLIST TxnList
    count CDATA #REQUIRED>

<!-- define elements for TxnList -->
<!ELEMENT Txn (txnType, txnSource, amount, currency, purchaseOrderNo,
    approved, responseCode, responseText, settlementDate,
    txnID, preauthID?, CreditCardInfo)>
<!ATTLIST Txn
    ID CDATA #REQUIRED>

<!-- define elements for Txn -->
<!ELEMENT txnType (#PCDATA)>
<!ELEMENT txnSource (#PCDATA)>
<!ELEMENT amount (#PCDATA)>
<!ELEMENT currency (#PCDATA)>
<!ELEMENT purchaseOrderNo (#PCDATA)>
<!ELEMENT approved (#PCDATA)>
<!ELEMENT responseCode (#PCDATA)>
<!ELEMENT responseText (#PCDATA)>
<!ELEMENT settlementDate (#PCDATA)>
<!ELEMENT txnID (#PCDATA)>
<!ELEMENT preauthID (#PCDATA)>
<!ELEMENT CreditCardInfo (pan, expiryDate?, cardType?, cardDescription?)>
<!ELEMENT DirectEntryInfo (bsbNumber, accountNumber, accountName)>

<!-- define elements for CreditCardInfo -->
<!ELEMENT pan (#PCDATA)>
<!ELEMENT expiryDate (#PCDATA)>
<!ELEMENT cardType (#PCDATA)>
<!ELEMENT cardDescription (#PCDATA)>
```

```
<!-- define elements for DirectEntryInfo -->
<!ELEMENT bsbNumber (#PCDATA)>
<!ELEMENT accountNumber (#PCDATA)>
<!ELEMENT accountName (#PCDATA)>
```

Appendix I: Currency Codes List

You **must meet** certain requirements with your bank and SecurePay before using SecurePay's multi-currency features. Please ask SecurePay if we support multi-currency payments through your bank, and if so, what currency types are available. You may also need to open multi-currency accounts with your bank for each currency you propose to transact in. Contact SecurePay Support or your SecurePay Account Manager for full details.

Code	Description	Minor Units	Example*	
			Amount	Pass As
AUD	Australian Dollar	2	$20	2000
CAD	Canadian Dollar	2	$20	2000
CHF	Swiss Franc	2	20	2000
EUR	Euro	2	€20	2000
GBP	English Pound	2	£20	2000
HKD	Hong Kong Dollar	2	$20	2000
JPY	Japanese Yen	0	¥20	20
NZD	New Zealand Dollar	2	$20	2000
SGD	Singapore Dollar	2	$20	2000
USD	US Dollar	2	$20	2000

* To pass a multicurrency payment to SecurePay, set `<currency>` field with the value from the Code column, and set `<amount>` field with the amount to be charged, ensuring you set the correct number of Minor Units for the selected currency, as shown in the examples.

E.g. For US Dollars, $4,125.90 is set using:

```
<amount>412590</amount>
<currency>USD</currency>
```

or for Japanese Yen, ¥67,925 is set using:

```
<amount>67925</amount>
<currency>JPY</currency>
```

Appendix J: EBCIDEC Character Set

Description	Characters allowed
Numeric	0 - 9
Alphabetic	a – z, A - Z
Oblique slash	/
Hyphen	-
Ampersand	&
Period	.
Asterisk	*
Apostrophe	‘
Blank space	