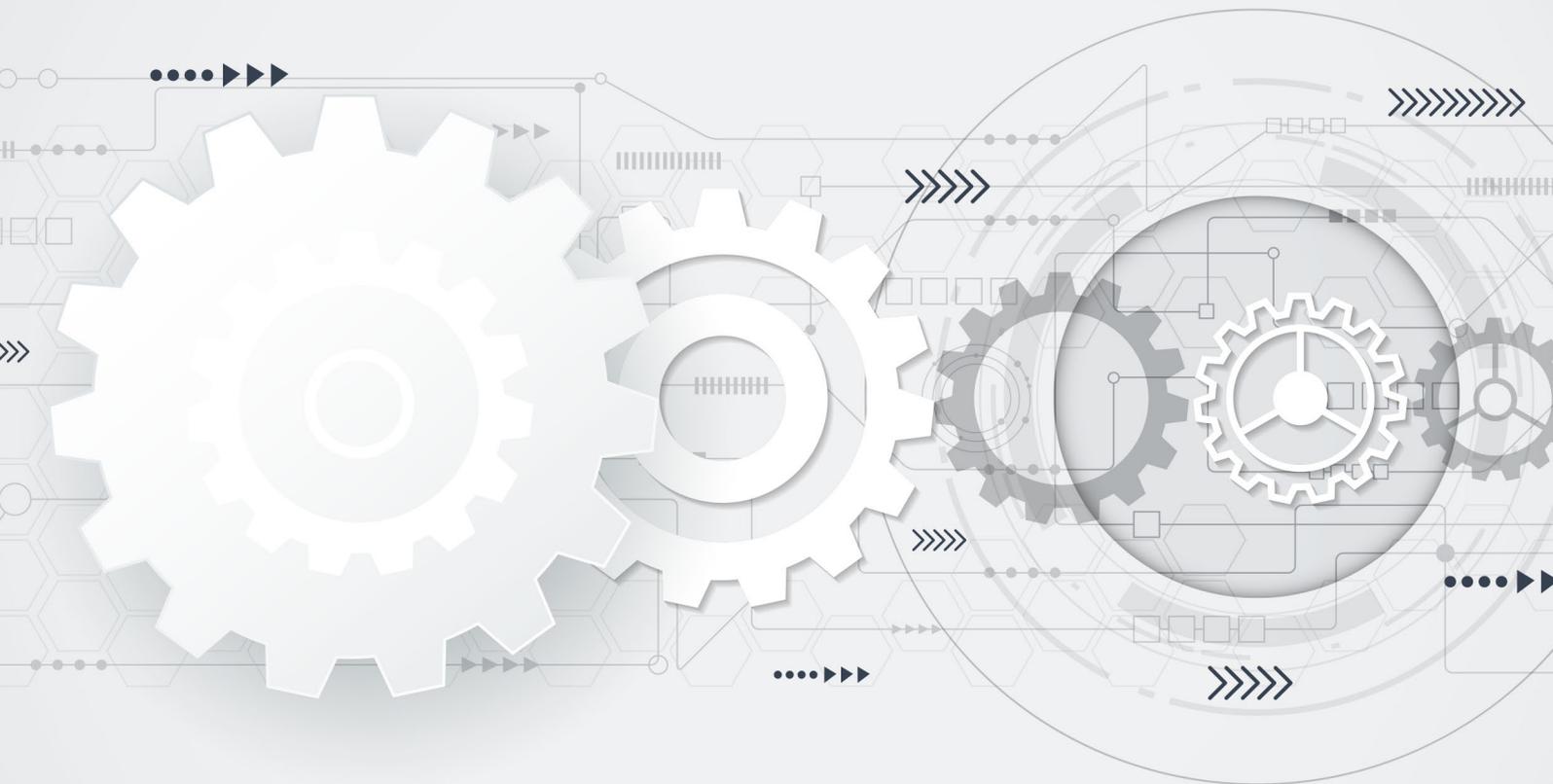


# PAYHOST<sup>™</sup>

JUNE 2017

VERSION 1.6.2



|   |           |
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## Version History

| Version | Date           | Comment  |
|---------|----------------|--|
| 1.0     | March 2013     | Document created   |
| 1.1     | May 2013       | WebPayment Request & PaymentType included; Status Response updated to make use of new PaymentType.                               |
| 1.2     | July 2013      | Added Billing Descriptor optional field.   |
| 1.3     | August 2013    | Added further information to Redirect To PayGate section.  |
| 1.4     | August 2013    | Updated changes to fields returned in the Status Details (StatusType) object   |
| 1.5     | October 2014   | Added Single Payout, Void, Settlement and Refund request. Added fields to StatusType Complex type.                               |
| 1.6     | October 2014   | Added PayVault CardVault, LookupVault, DeleteVault requests. Added PayVault fields to CardPaymentRequest requests and responses. |
| 1.6.1   | March 2015     | Updated test account details   |
| 1.6.2   | September 2015 | Added TokenPayment request. Added Transaction Status codes. Added additional information for Refund and Query follow up request. |

## Introduction

PayHost is a secure PCI compliant payment system hosted by PayGate. A single integration to PayHost gives you access to multiple payment methods and PayGate is continually adding to the list of available payment methods. Please confirm with our Support team at [support@paygate.co.za](mailto:support@paygate.co.za) which payment methods and financial institutions are currently supported in your country.

PayHost allows merchants to integrate into the PayGate system via a 'host-to-host' service and make use of a number of different payment methods, risk services and PCI compliant credit card data storage. PayHost also allows payments to be processed via a redirect to a PayGate-hosted secure payments page.

A payment encryption service such as Visa Checkout is also compatible with PayHost and can be used for customers to authenticate and authorise their payments before a transaction is processed. This encrypted data can then be sent to PayGate for processing in place of card details using the TokenPayment request type. Please contact PayGate to confirm whether Visa Checkout is compatible with your acquiring bank.

PayHost provides an ideal payment processing solution to applications for online shopping, call-centres, vending machines or any application requiring fast and reliable payment processing using the Internet as a transport layer.

## PayHost Applications

PayHost is a 'host-to-host' integration which makes it ideal for any application where there is internet connectivity. This includes but is not limited to web applications, ticketing systems, applications for mobile phones or vending machines.

## Integration Options

PayHost can be used in any environment that allows data to be transferred over a HTTPS connection. SOAP is used as the message transport language for PayHost. A merchant can integrate into PayHost using any programming language that supports SOAP calls.

Some suggested programming languages are:

- Java
- .Net

## PayHost Technical Details

PayHost uses the following URLs:

All messages for the PayHost service must be posted to :  
**<https://secure.paygate.co.za/payhost/process.trans>**

The WSDL for PayHost is : **<https://secure.paygate.co.za/payhost/process.trans?wsdl>**

## PayGate account setup options – per PayGateID

The following parameters are configured for each PayGate account (i.e. per PayGateID). These are agreed and pre-set when your account with PayGate is configured by our Support team.

### Password & Card Types Accepted

Merchants are given access to the PayHost configuration page (via the PayGate Back Office) where they set the following options:

- The PayHost password that is passed in the message header.
- Choose which credit card brands to accept. MasterCard and Visa are enabled by default.

### Auto-Settle : Default is ON

Applies to : Credit card processing.

With this option enabled, you do not need to send a Settlement request for an approved Authorisation. As soon as the bank approves the Authorisation, PayGate immediately and automatically creates the Settlement transaction on your behalf. This option is enabled by default

### Process Unauthenticated Transactions: Default is OFF

Applies to : Credit card processing with a 3D Secure integration.

For merchants with 3D Secure enabled on their PayGate ID, any MasterCard or Visa transaction that is not authenticated through Verified-by-Visa / MasterCard SecureCode is declined and not sent to the bank for authorisation. Enabling this option allows the merchant to send unauthenticated transactions to the bank for authorisation. The option is disabled by default and we discourage merchants from enabling this option, as they will not receive chargeback protection on fraudulent transactions.

### PayProtector: Default is Not Activated

Applies to : Credit card processing.

PayProtector is PayGate's fraud and risk system, designed to help the merchant minimise the risk of loss from fraudulent transactions. Fraud has become a serious problem and often adds significant costs for internet merchants. PayProtector scrutinises transactions from a number of angles combining internal, local and international information to identify, report on, and / or block fraudulent transactions.

Please contact [support@paygate.co.za](mailto:support@paygate.co.za) if you would like more information on PayProtector.

Payment Confirmation : Default is Activated with no Bcc  
Applies to : Transaction processing in the Redirect Solution.

By default PayGate will send a Payment Confirmation email to the customers email address for each approved transaction. If this functionality is not required then it can be switched off per PayGateID. By default nobody is blind copied (Bcc) on payment confirmation emails, but if required a merchant may provide an email address which will be Bcc'd on each payment confirmation email sent.

## Setup options when more than one payment method is activated

Applies to : Transaction processing in the Redirect Solution.

PayGate allows merchants to have multiple terminals, each with their own unique PayGateID. Each terminal has access to the PayGate Back Office admin website and all transactions processed by PayGate using a particular PayGateID are visible in the corresponding Back Office website. Reports can be viewed in the back office or downloaded into MS Excel (or similar) applications for offline reporting.

A merchant with multiple payment methods can choose to either:

- a) have multiple payment methods all activated on a single PayGateID or,
- b) to have multiple PayGateID's with a single payment method active per PayGateID or,
- c) to have multiple payment methods activated on a single PayGateID and specify for each transaction which payment methods should be visible to the client (using the PaymentMethod and PaymentMethodDetail fields to control this).

If option a) is chosen, then PayHost will display a menu of payment options to the client. The client will choose how (s)he wants to pay and select the relevant menu option.

If option b) is chosen, then the client will be taken directly to the relevant payment page.

If option c) is chosen, then a menu of payment options will be shown only if more than one payment method meets the criteria specified in the PaymentMethod and PaymentMethodDetail fields for the transaction.

## Payment Methods

### Card Processing

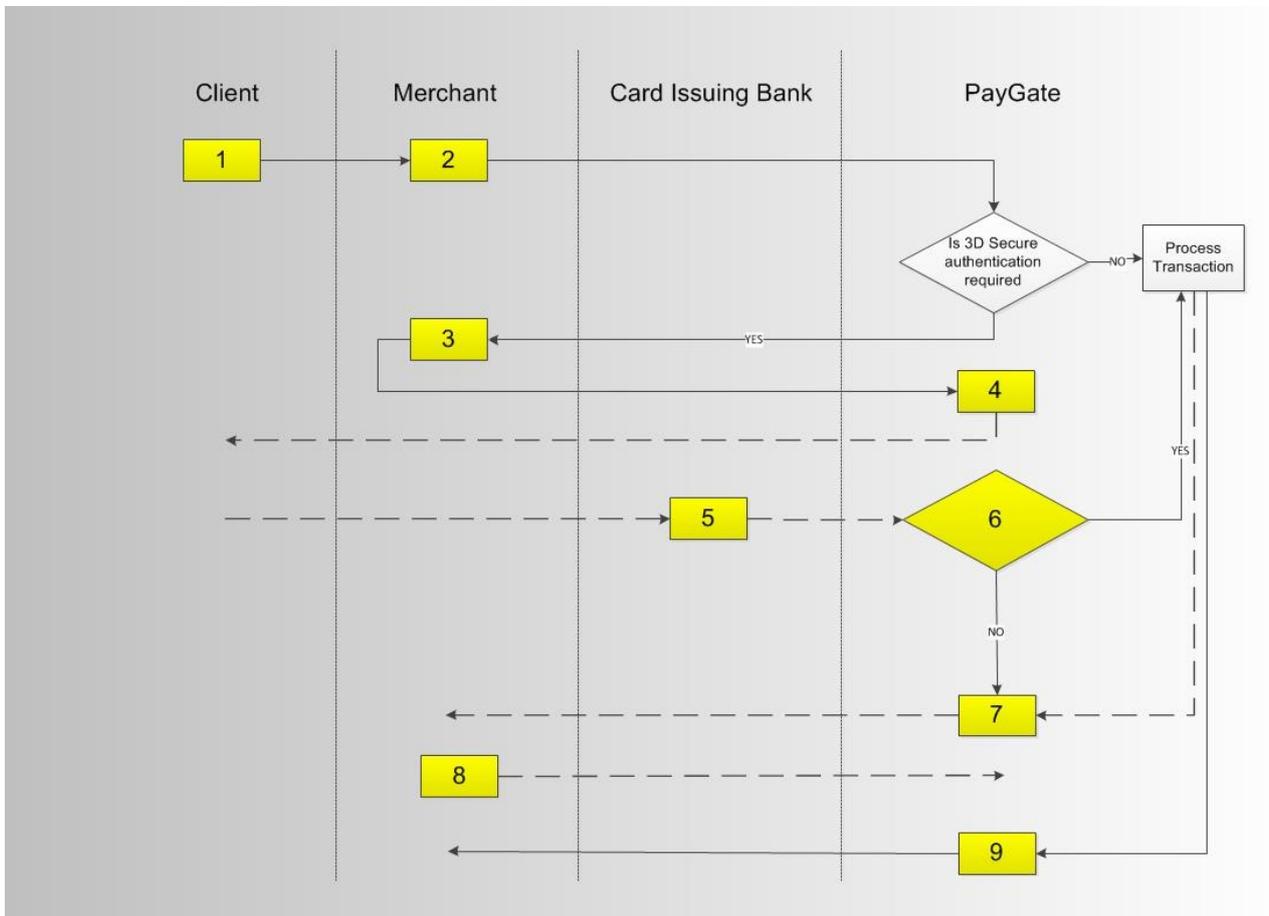
The payment request transaction reserves the specified amount on the supplied credit card, but does not move the funds from the credit card account to the merchants account. To move the funds you must either process a Settlement transaction or get PayGate to turn on the AutoSettle option when your PayGateID is created. Note that Auto Settle is switched ON by default. (Refer to the PayGate account setup options).

A payment request transaction becomes more complicated if 3D Secure authentication is required.

PayHost caters for 3 approaches to 3D secure:-

- i No 3D Secure
- ii 3D Secure using PayGate's 'Merchant Plug In' (MPI)
- iii 3D Secure using the merchant's MPI

## Process Flow Diagram – Card Payment



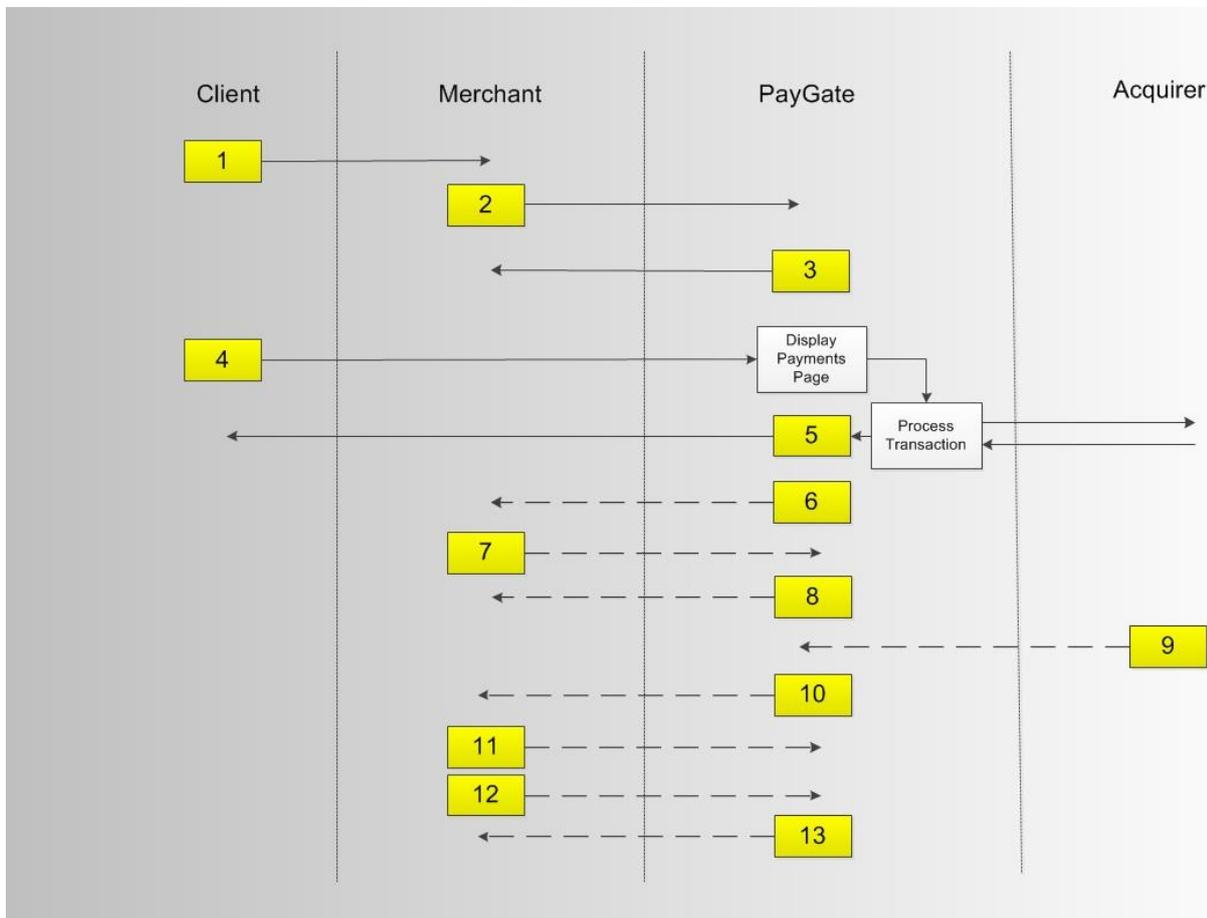
### Steps in the payment request process

1. Customer enters card details on the merchant's web site / system.
2. Merchant sends a payment request message to PayHost.
- The following steps are only required if a "Secure" message is received in step 3.*
3. The merchant is required to redirect the customer's internet browser to PayGate's MPI. (Refer to "3D Secure using PayGate's MPI" for more detail).
4. PayGate re-redirects the customer to the appropriate issuing bank 3D Secure authentication page. Customers will be required to enter a PIN code / password known only to themselves and their bank in order to authenticate them.
5. The issuing bank 3D Secure authentication page will redirect the customer's browser back to PayGate.
6. If the message received from the issuing bank (in step 6) is valid, then PayGate processes the transaction to the acquiring bank and sends a payment notification message to the merchant (if the merchant has specified a NotifyUrl)..
7. The Merchant website responds with the word 'OK' to PayGate.
8. PayGate redirects the customer's browser back to the merchant's website so that the merchant can complete the order process. (Refer to "Redirect to website" for more detail).

*The following step follows on from step 3.*

9. The transaction is processed to the acquiring bank and the result is returned.

## Process Flow Diagram – Web Payment



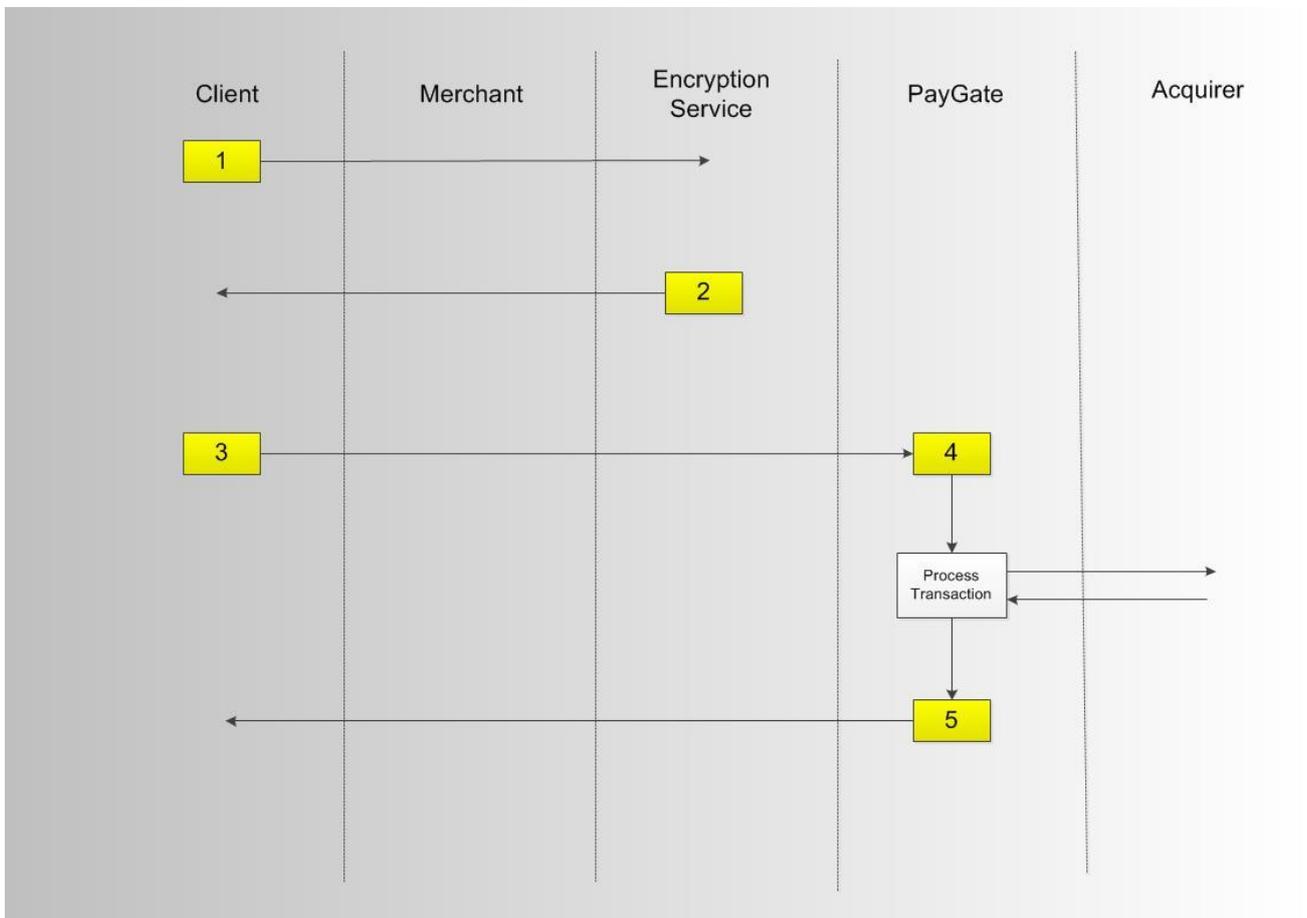
### Steps in the payment request process

1. Customer initiates payment on merchant's website.
2. Merchant sends a web payment request message to PayGate.
3. PayGate responds with the PayGate payment page URL that the merchant.
4. The merchant is required to redirect the customer's internet browser to the PayGate payments page.
5. Once the client has completed the payment the customer is redirected back to the merchant's website.
6. PayGate sends a notification to the Merchant's system confirming that the payment has been processed
7. The merchant sends PayGate a Query request for the transaction.
8. PayGate responds with the transaction's current status.

*The following only applies for asynchronous payment methods where the final transaction status is received from the acquirer after the online payment process is completed.*

9. PayGate receives notification of the transaction's final status from the relevant acquirer.
10. PayGate sends a notification to the merchant's notification URL that the final status has been received.
11. The merchant's system responds with 'OK' to acknowledge receipt of the notification.
12. The merchant's system sends PayGate a Query request for the transaction.
13. PayGate responds with the transaction's final status as received from the acquirer.

## Process Flow Diagram – Token Payment



### Steps in the payment request process

1. Customer is redirected to the payment encryption service provider to authorise and authenticate the transaction.
2. The payment encryption service provider sends the merchant encrypted data for the payment.
3. The merchant sends the relevant encrypted data to PayGate along with other transaction data.
4. PayGate decrypts the data received and processes the authorisation to the acquiring bank.
5. Once the acquiring bank has responded with the authorisation status PayGate sends this response to the merchant.

## Message Types



### Request:

#### PayGate Account Details (*PayGateAccountType*)

| Field  | Type        | Required |
|--|-------------|----------|
| <b>PayGateId</b><br>Your PayGateID – assigned by PayGate.  | Number(11)  | Yes      |
| <b>Password</b><br>Your password. The password is set by the merchant in the PayGate back office. The password you send with each transaction must correspond to the value set in the back office. | Varchar(32) | Yes      |

#### Risk Details (*RiskType*)

| Field  | Type         | Required  |
|--|--------------|---|
| <b>AccountNumber</b><br>An account number/unique ref number at the Merchant associated with the individual who is transacting with the merchant.   | Varchar(30)  | No – Unless Fraud and Risk screening is activated                 |
| <b>SessionId</b><br>Web server generated id  | Varchar(255) | No  |
| <b>IpV4Address</b><br>The customer's ip v4 address. This attribute is required if the merchant is subscribed to PayProtector.  | Varchar(15)  | No – Unless PayProtector or Fraud and Risk screening is activated |
| <b>IpV6Address</b><br>The customer's ip v6 address. This attribute is required if the merchant is subscribed to PayProtector.  | Varchar(15)  | No – Unless PayProtector or Fraud and Risk screening is activated |
| <b>UserId</b><br>This is a Merchant configurable data field typically used to identify a customer uniquely within the system, regardless of the amount of accounts that the customer has.  | Varchar(36)  | No  |
| <b>Machineld</b><br>This is an ID used to identify the computer (actual hardware) uniquely within the system, regardless of the amount of customers or accounts that's using the computer. Examples of the User Machine ID are Motherboard ID, Hard drive ID, CPU ID, etc.   | Varchar(255) | No  |
| <b>UserProfile1</b><br>This is a customizable field that may be used by the merchant to supplement fraud screening processes according to a risk classification set by the merchant.<br>(e.g. VIP flag, Indication whether the transaction is part of a promotion, a confidence level around the identity of the customer, etc.) | Varchar(20)  | No  |
| <b>UserProfile2</b><br>This is a customizable field that may be used by the merchant to supplement fraud screening processes according to a risk   | Varchar(20)  | No  |

|  |             |   |
|--|-------------|---|
| classification set by the merchant.<br>(See above examples.)   |             |   |
| <b>UserProfile3</b><br>This is a customizable field that may be used by the merchant to supplement fraud screening processes according to a risk classification set by the merchant. (See above examples.) | Varchar(20) | No  |
| <b>ConsumerWatch</b><br>Register the consumer associated with this transaction for the consumer product.<br>possible values:<br>Y = Yes<br>N = No  | Char(1)     | No  |
| <b>Browser</b><br>Contains a complex type of browser fields  |             | Refer to <b>BrowserType</b> section for further details |

#### **Customer Details** (*PersonType*)

| <b>Field</b>   | <b>Type</b>           | <b>Required</b>  |
|--|-----------------------|--|
| <b>Title</b><br>Customer's title   | Varchar(5)            | No   |
| <b>FirstName</b><br>Customer's first name.<br>Note: The <i>combined</i> length of the <i>FIRST_NAME</i> , <i>MIDDLE_NAME</i> and <i>LAST_NAME</i> fields should not exceed 50 characters | Varchar(50)           | Yes  |
| <b>MiddleName</b><br>Customer's last name.<br>Note: The <i>combined</i> length of the <i>FIRST_NAME</i> , <i>MIDDLE_NAME</i> and <i>LAST_NAME</i> fields should not exceed 50 characters | Varchar(50)           | No   |
| <b>LastName</b><br>Customer's last name.<br>Note: The <i>combined</i> length of the <i>FIRST_NAME</i> , <i>MIDDLE_NAME</i> and <i>LAST_NAME</i> fields should not exceed 50 characters   | Varchar(50)           | Yes  |
| <b>Telephone1</b><br>Customer's telephone number<br>e.g. "+27 21 9991234"  | Varchar(45)           | No - <i>Unless Fraud and Risk screening is activated</i> |
| <b>Telephone2</b><br>Customer's alternative telephone number.  | Varchar(45)           | No   |
| <b>Mobile</b><br>Customer's mobile phone number.   | Varchar(45)           | No   |
| <b>Fax</b><br>Customer's fax number.   | Varchar(45)           | No   |
| <b>Email1</b><br>The customer's email address.   | Varchar(255)          | Yes  |
| <b>Email2</b><br>The customer's alternate email address.   | Varchar(255)          | No   |
| <b>DateOfBirth</b><br>Customer's date of birth.  | Number(8)<br>ddmmyyyy | No   |

|  |             |   |
|--|-------------|---|
| e.g. 01 Jan 2013 will be 01012013  |             |   |
| <b>Nationality</b><br>Customer's nationality.<br>Refer to <a href="#">Appendix A</a> for valid country codes.<br>e.g. If the customer is living in London, then the country code would be set to GBR.  | Char(3)     | No  |
| <b>IdNumber</b><br>Customer's ID, Passport or other verification document number.  | Varchar(40) | No  |
| <b>IdType</b><br>A code that defines the type of verification document supplied.<br>possible values:<br>1 = Passport<br>2 = Personal ID<br>3 = Identity Card<br>4 = Driver's License<br>5 = Other<br>8 = Travel Document<br>12 = Residence Permit<br>13 = Identity Certificate<br>16 = Registro Federal de Contribuyentes<br>17 = Credencial de Elector<br>18 = DNI<br>19 = NIE<br>20 = CPR Number | Number(2)   | No  |
| <b>SocialSecurityNumber</b><br>Social Security Number (US Residents).<br>Last 4 digits of the SSN  | Number(4)   | No  |
| <b>Address</b><br>Contains a complex type of address fields  |             | Refer to <b>AddressType</b> section for further details |

**Browser Details** (*BrowserType*)

| Field  | Type         | Required |
|--|--------------|----------|
| <b>UserAgent</b><br>USER_AGENT of the browser used | Varchar(255) | No       |
| <b>Language</b><br>Language of the browser used    | Varchar(30)  | No       |

**Address Details** (*AddressType*)

| Field   | Type        | Required |
|---|-------------|----------|
| <b>AddressLine1</b><br>Customer's address line 1. | Varchar(60) | Yes      |
| <b>AddressLine2</b><br>Customer's address line 2. | Varchar(60) | No       |
| <b>AddressLine3</b><br>Customer's address line 3. | Varchar(60) | No       |

|  |             |  |
|--|-------------|--|
| <b>City</b><br>Customer's city   | Varchar(25) | No – <i>Unless Fraud and Risk screening is activated</i> |
| <b>Country</b><br>Customer's country.<br>Refer to <a href="#">appendix A</a> for valid country codes.<br>e.g. If the customer is living in London, then the country code would be set to GBR.                              | Char(3)     | No – <i>Unless Fraud and Risk screening is activated</i> |
| <b>State</b><br>Customer's State/Province/District/ County.<br>Note: For USA and Ireland, Canada and the UK, a 2-character code needs to be supplied where the Merchant requests verification services in these countries. | Varchar(25) | No   |
| <b>Zip</b><br>Customer's zip/postal code.  | Varchar(10) | No   |

**Shipping Details** (*ShippingDetailsType*)

| Field  | Type                  | Required  |
|--|-----------------------|---|
| <b>Customer</b><br>Contains a complex type of customer fields  |                       | Refer to <b>PersonType</b> section for further details  |
| <b>Address</b><br>Contains a complex type of address fields  |                       | Refer to <b>AddressType</b> section for further details |
| <b>DeliveryDate</b><br>Delivery date<br>e.g. 01 Jan 2013 will be 01012013  | Number(8)<br>ddmmyyyy | No  |
| <b>DeliveryMethod</b><br>Method of delivery  | Varchar(30)           | No  |
| <b>InstallationRequested</b><br>Indicates whether goods are supplied together with a physical installation.<br>possible values:<br>Y = Yes<br>N = No | Char(1)               | No  |

**Billing Details** (*BillingDetailsType*)

| Field   | Type | Required  |
|---|------|---|
| <b>Customer</b><br>Contains a complex type of customer fields |      | Refer to <b>PersonType</b> section for further details  |
| <b>Address</b><br>Contains a complex type of address fields   |      | Refer to <b>AddressType</b> section for further details |

**Order Item Details** (*OrderItemType*)

| Field   | Type        | Required |
|---|-------------|----------|
| <b>ProductCode</b><br>Line item's product code.<br>Note: If 1 line item tag's value is populated, all tags must be included                 | Varchar(50) | No       |
| <b>ProductDescription</b><br>Line item's product description  | Varchar(50) | No       |
| <b>ProductCategory</b><br>Line item's product category  | Varchar(50) | No       |
| <b>ProductRisk</b><br>Line item's product risk<br>e.g. High, Medium or Low  | Varchar(50) | No       |
| <b>OrderQuantity</b><br>Line item's order quantity  | Number(11)  | No       |
| <b>UnitPrice</b><br>Line item's unit price<br>e.g. R32.95 would be specified as 3295  | Number(11)  | No       |
| <b>Currency</b><br>Currency code of the currency the customer is paying in.<br>Refer to <a href="#">appendix A</a> for valid currency codes | Char(3)     | No       |

**Order Details** (*OrderType*)

| Field   | Type        | Required |
|---|-------------|----------|
| <b>MerchantOrderId</b><br>This is your reference number for use by your internal systems.<br>e.g. Your Customer, Invoice or Order Number.               | Varchar(80) | Yes      |
| <b>Currency</b><br>Currency code of the currency the customer is paying in.<br>Refer to <a href="#">appendix A</a> for valid currency codes             | Char(3)     | Yes      |
| <b>Amount</b><br>Transaction amount in cents.<br>e.g. R32.95 would be specified as 3295   | Number(11)  | Yes      |
| <b>Discount</b><br>Discount amount in cents.<br>e.g. R32.95 would be specified as 3295<br>Note: This amount will not be deducted from the amount field. | Number(11)  | No       |

|   |   |   |
|---|---|---|
| This value is passed to the Fraud and Risk screening service if the merchant is making use of the service.  |   |   |
| <b>TransactionDate</b><br>This is the date that the transaction was initiated on your website or system.<br>The transaction date must be specified in 'Coordinated Universal Time'<br>(UTC)<br>e.g. 2013-01-01T18:30:00+02:00 | Varchar(19)<br><br>[-]CCYY-MM-DDThh:mm:ss[Z (+ -)hh:mm] | Yes   |
| <b>BillingDetails</b><br>Contains a complex type of billing fields  |   | Refer to <b>BillingType</b> section for further details   |
| <b>ShippingDetails</b><br>Contains a complex type of shipping fields  |   | Refer to <b>ShippingType</b> section for further details  |
| <b>OrderItems1</b><br>Contains a complex type of order item fields<br>Can contain multiple  |   | Refer to <b>OrderItemType</b> section for further details |
| <b>Locale</b><br>Customer locale of type Language   |   | Refer to <b>LanguageType</b> section for further details  |

**Passenger Details** (*PassengerType*)

| Field   | Type        | Required   |
|---|-------------|--|
| <b>Passenger</b><br>Contains a complex type of customer fields  |             | Refer to <b>PersonType</b> section for further details |
| <b>TravellerType</b><br>The type of passenger travelling, e.g. Adult, Child, Infant.<br>possible values:<br>A = Adult<br>C = Child<br>I = Infant  | Char(1)     | Yes  |
| <b>LoyaltyNumber</b><br>Passenger's loyalty scheme number.  | Varchar(20) | No   |
| <b>LoyaltyType</b><br>Passenger's loyalty scheme<br>(e.g. .... Voyager, )   | Varchar(20) | No   |
| <b>LoyaltyTier</b><br>Passenger's loyalty scheme status or level<br>possible values:<br>1 = highest tier level e.g. platinum<br>2 = second highest tier level e.g. gold<br>3 = third highest tier level e.g. silver...,etc. | Number(3)   | No   |

**Flight Leg Details** (*FlightLegType*)

| Field  | Type                                      | Required |
|--|---|----------|
| <b>DepartAirport</b><br>Departure point airport.<br>Note: this is a 3 character code that needs to be supplied. These values must belong to the airport list in the lookup table that is created. An appendix will be created for the API. | Char(3)                                   | Yes      |
| <b>DepartCountry</b><br>Departure Country.<br>Refer to <a href="#">appendix A</a> for valid country codes.<br>e.g. If the customer is living in London, then the country code would be set to GBR.   | Char(3)                                   | Yes      |
| <b>DepartDateTime</b><br>Local Date & time of scheduled departure.   | Datetime<br>Format yyyy-mm-dd<br>hh:mm:ss | Yes      |
| <b>DepartAirportTimeZone</b><br>Local time zone, GMT +/- hours.<br>example: +01:00   | Time format<br>(+/-hh:mm)                 | No       |
| <b>ArrivalAirport</b><br>Arrival point.<br>Note: this is a 2 character code that needs to be supplied, these values must belong to the airport list in the lookup table that is created, and an appendix will be created for the API.      | Char(3)                                   | Yes      |
| <b>ArrivalCountry</b><br>Arrival Country.<br>Refer to <a href="#">appendix A</a> for valid country codes.<br>e.g. If the customer is living in London, then the country code would be set to GBR.  | Char(3)                                   | Yes      |
| <b>ArrivalDateTime</b><br>Local Date & time of scheduled arrival.  | Datetime<br>Format yyyy-mm-dd<br>hh:mm:ss | Yes      |
| <b>ArrivalAirportTimeZone</b><br>Local time zone, GMT +/- hours.<br>example: +01:00  | Time format<br>(+/-hh:mm)                 | No       |
| <b>Carrier</b><br>Flight carrier for the journey.<br>Note: this is a 2 character code that needs to be supplied. The values must belong to the carrier list in the lookup table.   | Char(2)                                   | Yes      |
| <b>FlightNumber</b><br>Flight number for the journey.<br>(Data Capture – not fed into rules engine)  | Char(4)                                   | Yes      |
| <b>FareBasisCode</b><br>The fare basis code provides information about the specific fare in addition to the class of service required for booking.<br>example: HL7LNR  | Char(10)                                  | No       |
| <b>FareClass</b><br>Class of flight.<br>example:<br>F (=Unrestricted First Class)<br>FR (=Restricted First Class)<br>F (=Unrestricted Business Class)<br>CR (=Restricted Business Class)   | Char(3)                                   | No       |

|  |            |     |
|--|------------|-----|
| Y (=Unrestricted Coach/Economy Class)<br>YD (=Restricted Coach/Economy Class)<br>(Data Capture – not fed into rules engine)  |            |     |
| <b>BaseFare</b><br>The amount of the transaction, excluding taxes and fees, in the smallest unit of the currency i.e. cents or pence.<br>(e.g. US\$100.01 = 10001 OR ¥100 = 100).<br>(Data Capture – not fed into rules engine. For reporting/review purposes. Fraud screening and related velocity calculations will initially be based upon the total value of the purchase transaction) | Number(11) | Yes |
| <b>BaseFareCurrency</b><br>This is the ISO numeric code for the currency in which the transaction should be processed. See Appendix 7.3 for applicable codes.<br>This is mandatory if a base fare is supplied.<br>(Data Capture – not fed into rules engine. For reporting/review purposes)  | Char(3)    | Yes |

#### **Airline Booking Details** (*AirlineBookingType*)

| Field  | Type          | Required |
|--|---------------|----------|
| <b>TicketNumber</b><br>The ticket number assigned to the journey.  | Varchar(30)   | Yes      |
| <b>PayerTravelling</b><br>An indication whether the person paying is also travelling on the ticket.<br>possible values:<br>Y = Yes<br>N = No | Char(1)       | No       |
| <b>PNR</b><br>Passenger Name Record  | Varchar(10)   | Yes      |
| <b>Passengers</b><br>Contains a complex type of Passenger fields   | PassengerType | Yes      |
| <b>FlightLegs</b><br>Contains a complex type of Flight Leg fields  | FlightLegType | Yes      |

#### **Language Details** (*LanguageType*)

The "LanguageType" element is used in such elements as "Locale" and "Browser Language".

| Field   | Type        | Required |
|---|-------------|----------|
| <b>Language</b><br>Format to use - [a-zA-Z]{2}([iI]-[a-zA-Z]+ [xX]-[a-zA-Z]{1,8})-([a-zA-Z]{1,8})<br>e.g. en-US | Varchar(30) | No       |

#### **User Defined Field Details** (*UserDefinedFieldType*)

| Field  | Type         | Required |
|--|--------------|----------|
| <b>UserDefinedField1</b><br>This field is a placeholder for merchant specific requirements | Varchar(255) | No       |

|  |              |    |
|--|--------------|----|
| <b>UserDefinedField2</b><br>This field is a placeholder for merchant specific requirements | Varchar(255) | No |
| <b>UserDefinedField3</b><br>This field is a placeholder for merchant specific requirements | Varchar(255) | No |
| <b>UserDefinedField4</b><br>This field is a placeholder for merchant specific requirements | Varchar(255) | No |
| <b>UserDefinedField5</b><br>This field is a placeholder for merchant specific requirements | Varchar(255) | No |

### **Redirect Details** (*RedirectRequestType*)

The "NotifyUrl" and "RedirectUrl" are only required if the Merchant is using 3D Secure using PayGate's MPI, Redirect Solution (i.e. *PayGate Hosted Payment Page*) or further details are required for a specific payment method.

| Field  | Type | Required   |
|--|------|--|
| <b>NotifyUrl</b><br>The Notification URL.<br>This is the URL on your site that PayHost will post the final transaction result to. This attribute must only be passed if you intend to use PayHost with 3D Secure using PayGate's MPI or PayHost redirect solution.   | Text | Yes - for 3D Secure using PayGate's MPI or Redirect Solution |
| <b>ReturnUrl</b><br>The Return URL.<br>This is the URL on your site that PayHost will redirect the customer to once the transaction is complete. This attribute must only be passed if you intend to use 3D Secure using PayGate's MPI or PayHost redirect solution. | Text | Yes - for 3D Secure using PayGate's MPI or Redirect Solution |

### **3D Secure Details** (*ThreeDSecureType*)

The "ThreeDSecureType" element should **only** be included when the Merchant has used their own MPI server to further Authenticate the Card Holder for MasterCard SecureCode / Verified-by-Visa.

| Field  | Type       | Required |
|--|------------|----------|
| <b>Enrolled</b><br>Enrolled status<br>e.g.<br>Y - Yes<br>N - No                | Char(1)    | Yes      |
| <b>Paresstatus</b><br>Pares status<br>e.g.<br>Y - Yes<br>N - No                | Char(1)    | Yes      |
| <b>Eci</b><br>The relevant ECI indicator                                       | Varchar(3) | Yes      |
| <b>Xid</b><br>The Base64 encoded transaction identifier                        | Text       | Yes      |
| <b>Cavv</b><br>The Base64 encoded cardholder authentication verification value | Text       | Yes      |

**Payment Details** (*PaymentType*)

| Field   | Type        | Required |
|---|-------------|----------|
| <p><b>Method</b><br/>This field contains a code describing/confirming the payment method used to process the transaction. It is especially useful where the merchant has more than one payment method activated. Refer to the Payment Method Codes table for a complete list.</p>   | Varchar(2)  | Yes      |
| <p><b>Detail</b><br/>This field may contain a description of the PaymentMethod code. For instance if the Method is 'CC' to indicate credit card, then the Detail will contain the type of credit card used 'MasterCard', 'Visa' etc. If the Method is something generic such as 'EW' = eWallet, then the Detail field will contain the name of the eWallet.</p> | Varchar(80) | No       |

**Card Payment Details** (*CardPaymentRequestType*)

| Field  | Type                | Required   |
|--|---------------------|--|
| <b>Account</b><br>PayGate account details  | PayGateAccountType  | Yes  |
| <b>Customer</b><br>Customer details  | PersonType          | Yes  |
| <b>CardNumber</b><br>Card number   | Number(19)          | Yes  |
| <b>CardExpiryDate</b><br>Expiry date<br>e.g. Jan 2020 will be 012020   | Number(6)<br>mmyyyy | Yes  |
| <b>CardIssueDate</b><br>The issue date of the Customer's debit card.<br>e.g. Jan 2012 will be 012012   | Number(6)<br>mmyyyy | Yes - If payment is being made using a Debit Card            |
| <b>CardIssueNumber</b><br>The Issue number of the customer's Debit Card  | Number(3)           | Yes - If payment is being made using a Debit Card            |
| <b>VaultId</b><br>This field is optional and should only be included if PayVault tokenisation is enabled. If a PayVault token GUID is sent the credit card transaction will be processed using the credit card associated with the token. A credit card CVV value will still be required. 3D Secure authentication may also be required.   | Varchar(40)         | No   |
| <b>CVV</b><br>Three or four digit CVV/CVC2 check digit from the back(Visa/MasterCard) or front (Amex/Diners) of the card.  | Number(4)           | Yes  |
| <b>Vault</b><br>This field is optional but should only be included if PayVault credit card tokenisation is enabled on the merchant profile. This field is used to indicate whether a PayVault token should be issued for the credit card used to make the payment. If True the credit card number will be added to PayVault and the associated Token will be returned in the response to the merchant. If not included the value is assumed to be False. | True/False          | No   |
| <b>BudgetPeriod</b><br>Set this field to 0 if the purchase is not on budget.<br>Budget Period is applicable to South African cards only.   | Number(2)           | Yes  |
| <b>Redirect</b><br>Contains a complex type of redirect fields  | RedirectRequestType | Yes - for 3D Secure using PayGate's MPI or Redirect Solution |
| <b>Order</b><br>Contains a complex type of order fields  | OrderType           | Yes  |
| <b>ThreeDSecure</b><br>Only append this element if you are using your own 3D Secure MPI.<br>Make sure you do not pass any values in the "Redirect" attribute.<br>Append this element containing the following fields to the payment processing message.<br>(Refer to the example '3D secure using your own MPI' below.)  | ThreeDSecureType    | No   |

|   |                      |  |
|---|----------------------|--|
| <b>Risk</b><br>Contains a complex type of risk fields   | RiskType             | No – <i>Unless Fraud and Risk screening is activated</i> |
| <b>BillingDescriptor</b><br>Value that must be passed to the acquirer to display on the customer's bank or account statement. Please note that this is not supported for all acquirers. | Varchar(45)          | No – <i>Will be ignored if not supported by acquirer</i> |
| <b>UserDefinedField</b><br>Contains a complex type of user defined fields   | UserDefinedFieldType | No   |

### Example of a Card Request:

```

<SinglePaymentRequest>
  <CardPaymentRequest>
    <Account>
      <PayGateId>10011013800</PayGateId>
      <Password>test</Password>
    </Account>
    <Customer>
      <Title>Mr</Title>
      <FirstName>Joe</FirstName>
      <LastName>Soap</LastName>
      <Telephone>0861234567</Telephone>
      <Mobile>0735552233</Mobile>
      <Email>joe@soap.com</Email>
    </Customer>
    <CardNumber>4000000000000002</CardNumber>
    <CardExpiryDate>122015</CardExpiryDate>
    <CVV>999</CVV>
    <BudgetPeriod>0</BudgetPeriod>
    <!-- 3D secure redirect object -->
    <Redirect>
      <NotifyUrl>https://www.mytestsite.com/notify</NotifyUrl>
      <ReturnUrl>https://www.mytestsite.com/return</ReturnUrl>
    </Redirect>
    <Order>
      <MerchantOrderId>INV101</MerchantOrderId>
      <Currency>ZAR</Currency>
      <Amount>100</Amount>
    </Order>
  </CardPaymentRequest>
</SinglePaymentRequest>
  
```

**Example of a Card Request with Tokenisation Requested:**

```

<SinglePaymentRequest>
  <CardPaymentRequest>
    <Account>
      <PayGateId>10011013800</PayGateId>
      <Password>test</Password>
    </Account>
    <Customer>
      <Title>Mr</Title>
      <FirstName>Firstname</FirstName>
      <LastName>Lastname</LastName>
      <Telephone>0211234567</Telephone>
      <Mobile>0873456789</Mobile>
      <Email>first.last@name.com</Email>
    </Customer>
    <CardNumber>5200000000000015</CardNumber>
    <CardExpiryDate>112030</CardExpiryDate>
    <CVV>123</CVV>
    <Vault>true</Vault>
    <BudgetPeriod>0</BudgetPeriod>
    <Order>
      <MerchantOrderId>YourInvoiceNumber1414070780226</MerchantOrderId>
      <Currency>ZAR</Currency>
      <Amount>113</Amount>
    </Order>
  </CardPaymentRequest>
</SinglePaymentRequest>
  
```

**Example of a Card Request Using a Token Instead of a Card Number and Expiry Date:**

```

<SinglePaymentRequest xmlns="http://www.paygate.co.za/PayHOST">
  <CardPaymentRequest>
    <Account>
      <PayGateId>10011013800</PayGateId>
      <Password> test</Password>
    </Account>
    <Customer>
      <Title>Mr</Title>
      <FirstName>Firstname</FirstName>
      <LastName>Lastname</LastName>
      <Telephone>0211234567</Telephone>
      <Mobile>0873456789</Mobile>
      <Email>first.last@name.com</Email>
    </Customer>
    <VaultId>eb9c11c5-e564-46e2-a087-2207ab8afadd</VaultId>
    <CVV>123</CVV>
    <BudgetPeriod>0</BudgetPeriod>
    <Order>
      <MerchantOrderId>YourInvoiceNumber1414070789678</MerchantOrderId>
      <Currency>ZAR</Currency>
      <Amount>113</Amount>
    </Order>
  </CardPaymentRequest>
</SinglePaymentRequest>
  
```

**Web Payment Details** (*WebPaymentRequestType*)

| Field  | Type                 | Required   |
|--|----------------------|--|
| <b>Account</b><br>PayGate account details  | PayGateAccountType   | Yes  |
| <b>Customer</b><br>Customer details  | PersonType           | Yes  |
| <b>Redirect</b><br>Contains a complex type of redirect fields  | RedirectRequestType  | Yes  |
| <b>Order</b><br>Contains a complex type of order fields  | OrderType            | Yes  |
| <b>Risk</b><br>Contains a complex type of risk fields  | RiskType             | No – <i>Unless Fraud and Risk screening is activated</i> |
| <b>Payment</b><br>Only include this element if you have multiple payment methods active on your account and you would like to limit the payment options displayed to your customer. I.e. you have SID & Ukash enabled but for this payment would only like to show the SID option. | PaymentType          | No   |
| <b>BillingDescriptor</b><br>Value that must be passed to the acquirer to display on the customer's bank or account statement. Please note that this is not supported for all acquirers.  | Varchar(45)          | No – <i>Will be ignored if not supported by acquirer</i> |
| <b>UserDefinedField</b><br>Contains a complex type of user defined fields  | UserDefinedFieldType | No   |

**Example of a Web Payment Request:**

```

<WebPaymentRequest>
  <Account>
    <PayGateId>10011013800</PayGateId>
    <Password>test</Password>
  </Account>
  <Customer>
    <Title>Mr</Title>
    <FirstName>Joe</FirstName>
    <LastName>Soap</LastName>
    <Email>joe@soap.com</Email>
  </Customer>
  <Redirect>
    <NotifyUrl>https://www.mytestsite.com/notify</NotifyUrl>
    <ReturnUrl>https://www.mytestsite.com/return</ReturnUrl>
  </Redirect>
  <Order>
    <MerchantOrderId>INV101</MerchantOrderId>
    <Currency>ZAR</Currency>
    <Amount>100</Amount>
    <TransactionDate>2014-04-06 10:28:39</TransactionDate>
  </Order>
</WebPaymentRequest>

```

**Token Payment Details** (*TokenPaymentRequestType*)

| Field  | Type                 | Required   |
|--|----------------------|--|
| <b>Account</b><br>PayGate account details  | PayGateAccountType   | Yes  |
| <b>Customer</b><br>Customer details  | PersonType           | Yes*   |
| <b>Token</b><br>The data provided by the payment encryption service provider.  | Text                 | Yes  |
| <b>TokenDetail</b><br>The description of the payment encryption service used e.g. Visa Checkout = VCO  | Varchar              | Yes  |
| <b>Vault</b><br>This field is optional but should only be included if PayVault credit card tokenisation is enabled on the merchant profile. This field is used to indicate whether a PayVault token should be issued for the credit card used to make the payment. If True the credit card number will be added to PayVault and the associated Token will be returned in the response to the merchant. If not included the value is assumed to be False. | True/False           | No   |
| <b>Order</b><br>Contains a complex type of order fields  | OrderType            | Yes  |
| <b>BillingDescriptor</b><br>Value that must be passed to the acquirer to display on the customer's bank or account statement. Please note that this is not supported for all acquirers.  | Varchar(45)          | No – <i>Will be ignored if not supported by acquirer</i> |
| <b>UserDefinedField</b><br>Contains a complex type of user defined fields  | UserDefinedFieldType | No   |

**\*Important Note :** Customer details only required based on the information available via the token. PayGate will advise which token detail requires customer information to be passed through.

**Note for Visa Checkout method:** All customer, shipping and billing details will be populated using data received from the Visa Checkout token unless customer and shipping details are passed through in the request, then this data will be used. Billing details will always be populated using Visa Checkout data.

**Example of a Token Request:**

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:pay="http://www.paygate.co.za/PayHOST">
  <soapenv:Header/>
  <soapenv:Body>
    <pay:SinglePaymentRequest>
      <pay:TokenPaymentRequest>
        <pay:Account>
          <pay:PayGateId>10011072130</pay:PayGateId>
          <pay:Password>test</pay:Password>
        </pay:Account>
        <pay:Token>2258098676320541501</pay:Token>
        <pay:TokenDetail>VCO</pay:TokenDetail>
        <pay:Order>
          <pay:MerchantOrderId>Reference</pay:MerchantOrderId>
          <pay:Currency>ZAR</pay:Currency>
          <pay:Amount>1000</pay:Amount>
        </pay:Order>
      </pay:TokenPaymentRequest>
    </pay:SinglePaymentRequest>
  </soapenv:Body>
</soapenv:Envelope>
```

## Response

### Status Name Details (*StatusNameType*)

|                                     |
|-------------------------------------|
| <b>Field</b>                        |
| <b>Error</b>                        |
| <b>Pending</b>                      |
| <b>Cancelled</b>                    |
| <b>Completed</b>                    |
| <b>ValidationError</b>              |
| <b>ThreeDSecureRedirectRequired</b> |
| <b>WebRedirectRequired</b>          |

### Status Details (*StatusType*)

| Field  | Type           | Required |
|--|----------------|----------|
| <b>TransactionId</b><br>The unique reference number assign by PayGate to this transaction.   | Number(11)     | Yes      |
| <b>Reference</b><br>This is your reference number for use by your internal systems. We return the MerchantOrderId you passed to us in the payment request.<br>e.g. Your Customer, Invoice or Order Number.   | Varchar(80)    | Yes      |
| <b>AcquirerCode</b><br>This is the transaction status code returned by the acquirer.   | String         | No       |
| <b>StatusName</b><br>Status. Refer to the transaction status table.  | StatusNameType | Yes      |
| <b>StatusDetail</b><br>Returns further detail relating to the <b>StatusName</b> returned   | Varchar(80)    | No       |
| <b>AuthCode</b><br>The Authorisation code returned by the acquirer (bank).   | Varchar(10)    | No       |
| <b>PayRequestId</b><br>The unique reference for the payment request  | Varchar(36)    | No       |
| <b>VaultId</b><br>This is the PayVault token associated to the card used to make the payment. This Vault ID can be re-used to process payments on the card. Only the PAN and Expiry Date are linked to this token. This is an optional field and is only returned if PayVault tokenisation is requested. | String         | No       |
| <b>VaultData1</b><br>This field contains information on the credit card or e-wallet account linked to the PayVault token for the purpose of managing the use of the token. This is an optional field and is only returned if PayVault tokenisation is requested.   | Varchar(50)    | No       |

|  |                      |   |
|--|----------------------|---|
| <b>VaultData2</b><br>This field contains information on the credit card or e-wallet account linked to the PayVault token for the purpose of managing the use of the token. This is an optional field and is only returned if PayVault tokenisation is requested.   | Varchar(50)          | No  |
| <b>TransactionStatusCode</b><br>Transaction status. Refer to the transaction status table.   | Number(1)            | Yes   |
| <b>TransactionStatusDescription</b><br>Transaction status description.   | Varchar(80)          | Yes   |
| <b>ResultCode</b><br>Result Code. Refer to the result code table.  | Number(11)           | Yes   |
| <b>ResultDescription</b><br>Result Code description.   | Varchar(80)          | Yes   |
| <b>Currency</b><br>Currency code of the currency the customer is paying in. Refer to appendix A for valid currency codes   | Char(3)              | Yes   |
| <b>Amount</b><br>Transaction amount in cents.<br>e.g. R32.95 would be specified as 3295  | Number(11)           | No  |
| <b>RequestedCurrency</b><br>The currency code in original request<br>Refer to Appendix A for valid currency codes  | Char(3)              | No – Only returned if PayFX currency conversion is used   |
| <b>RequestedAmount</b><br>The amount of the original request in cents  | Number(11)           | No – Only returned if PayFX currency conversion is used   |
| <b>ConversionRate</b><br>Conversion rate used, i.e. 10.40492   | Decimal              | No – Only returned if PayFX currency conversion is used   |
| <b>RiskIndicator</b><br>This is a 2-character field containing a risk indicator for this transaction. The first character describes Verified-by-Visa / MasterCard SecureCode authentication. Refer to the Authentication Indicator table for possible values. The second character is for future use and will be set to 'X'. | Char(2)              | Yes   |
| <b>Payment</b><br>The payment method type used in the transaction  | PaymentType          | Yes   |
| <b>BillingDescriptor</b><br>Value that must be passed to the acquirer to display on the customer's bank or account statement. Please note that this is not supported for all acquirers.  | Varchar(45)          | No – Will be not be returned if not supported by acquirer |
| <b>UserDefinedField</b><br>Contains a complex type of user defined fields  | UserDefinedFieldType | No  |

**Redirect Response Details** (*RedirectResponseType*)

The data in a Redirect Response message will contain a URL that the Merchant will be required to redirect the Customer to. There will also be a list of Key/Value pairs returned. A merchant should iterate through all the Key/Value pairs as all these will need to be included in the POST message when redirecting the Customer to the PayGate Payment Page.

Refer to the "[Redirect To PayGate](#)" section for further details on ways to redirect the Customer to the PayGate Payment Page.

| Field  | Type | Required |
|--|------|----------|
| <b>RedirectUrl</b><br>URL that the merchant needs to redirect the customer to. Refer to section "Redirect To PayGate" for further details.   | Text | Yes      |
| <b>KeyValuePairs</b><br>KeyValuePairs is an unbounded list of KeyValue pairs that could be returned. Each Key/Value pair will be enclosed in a UriParams element.<br>A merchant needs to loop through all Key/Value returned and pass these to the Url returned.<br>e.g.<br>Key = PayGateId<br>Value = 10011013800<br><pre> &lt;ns2:UriParams&gt;   &lt;ns2:key&gt;PAYGATE_ID&lt;/ns2:key&gt;   &lt;ns2:value&gt;10011013800&lt;/ns2:value&gt; &lt;/ns2:UriParams&gt;           </pre> | Text | Yes      |

**Single Payment Response (Non-redirect)**

| Field  | Type       | Required |
|--|------------|----------|
| <b>Status</b><br>A full transaction detail response will be returned | StatusType | Yes      |

**Example of a response where no redirect is required:**

```
<SinglePaymentResponse xmlns="http://www.paygate.co.za/PayHOST">
  <CardPaymentResponse>
    <Status>
      <TransactionId>28791836</TransactionId>
      <Reference>YourInvoiceNumber1414070789678</Reference>
      <AcquirerCode>00</AcquirerCode>
      <StatusName>Completed</StatusName>
      <AuthCode>FU6FWP</AuthCode>
      <PayRequestId>A23EF01C-D1E7-4F77-B50D-CEE28B3D4ACC</PayRequestId>
      <TransactionStatusCode>1</TransactionStatusCode>
      <TransactionStatusDescription>Approved</TransactionStatusDescription>
      <ResultCode>990017</ResultCode>
      <ResultDescription>Auth Done</ResultDescription>
      <Currency>ZAR</Currency>
      <Amount>113</Amount>
      <RiskIndicator>XX</RiskIndicator>
      <PaymentType>
        <Method>CC</Method>
        <Detail>MasterCard</Detail>
      </PaymentType>
    </Status>
  </CardPaymentResponse>
</SinglePaymentResponse>
```

**Example of a response where no redirect is required and tokenisation was requested:**

```
SinglePaymentResponse>
  <CardPaymentResponse>
    <Status>
      <TransactionId>28793400</TransactionId>
      <Reference>YourInvoiceNumber1414583977479</Reference>
      <AcquirerCode>00</AcquirerCode>
      <StatusName>Completed</StatusName>
      <AuthCode>8TDDFD</AuthCode>
      <PayRequestId>B897CD11-D0BE-50E3-68C9-7FB34B5C5C9B</PayRequestId>
      <VaultId>62a083d3-1f7c-474a-bd95-87387323dde0</VaultId>
      <VaultData1>xxxxxxxxxx0015</VaultData1>
      <VaultData2>112030</VaultData2>
      <TransactionStatusCode>1</TransactionStatusCode>
      <TransactionStatusDescription>Approved</TransactionStatusDescription>
      <ResultCode>990017</ResultCode>
      <ResultDescription>Auth Done</ResultDescription>
      <Currency>ZAR</Currency>
      <Amount>113</Amount>
      <RiskIndicator>XX</RiskIndicator>
      <PaymentType>
        <Method>CC</Method>
        <Detail>MasterCard</Detail>
      </PaymentType>
    </Status>
  </CardPaymentResponse>
</SinglePaymentResponse>
```

**Single Payment Response (Redirect)**

A “redirect” message will be returned if there is a requirement for the Merchant to redirect the Customer to the PayGate Payment page, i.e. further details are required for a specific payment method or transaction requires further authentication (MasterCard SecureCode / Verified-by-Visa), etc..

Note: not all cards require further authentication; American Express, Diners Club, and some banks that issue MasterCard / Visa credit cards do not subscribe to the MasterCard SecureCode / Verified-by-Visa programs.

Refer to the “Redirect To PayGate” section for further details on ways to redirect the Customer to the PayGate Payment Page.

| Field   | Type                 | Required |
|---|----------------------|----------|
| <b>Redirect</b><br>The redirect will contain the URL to where the Merchant needs to redirect the customer as well as Key/Value parameters that need to be included in the post when redirecting the customer. | RedirectResponseType | Yes      |

**Example of a card payment response where a redirect is required:**

```
<SinglePaymentResponse>
  <CardPaymentResponse>
    <Status>
      <StatusName>ThreeDSecureRedirectRequired</StatusName>
      <StatusDetail>3D Secure Redirect Required To Complete Transaction</StatusDetail>
    </Status>
    <Redirect>
      <RedirectUrl>https://secure.paygate.co.za/PayHost/redirect.trans</RedirectUrl>
      <UrlParams>
        <key>CHECKSUM</key>
        <value>7fe36c62991df6de51b09db0c6fd6r29</value>
      </UrlParams>
      <UrlParams>
        <key>PAY_REQUEST_ID</key>
        <value>5FC0E808-27EB-7A69-64BF-8163B2837869</value>
      </UrlParams>
      <UrlParams>
        <key>PAYGATE_ID</key>
        <value>10011013800</value>
      </UrlParams>
    </Redirect>
  </CardPaymentResponse>
</SinglePaymentResponse>
```

**Example of a web payment response where a redirect is required:**

```
<SinglePaymentResponse>
  <WebPaymentResponse>
    <Status>
      <StatusName>WebRedirectRequired</StatusName>
      <StatusDetail>Web Redirect Required To Complete Transaction</StatusDetail>
    </Status>
    <Redirect>
      <RedirectUrl>https://secure.paygate.co.za/PayHost/process.trans</RedirectUrl>
      <UrlParams>
        <key>PAY_REQUEST_ID</key>
        <value>18BBC8A5-FCFC-85AC-5733-F3EC906FD7E9</value>
      </UrlParams>
      <UrlParams>
        <key>PAYGATE_ID</key>
        <value>10011013800</value>
      </UrlParams>
      <UrlParams>
        <key>CHECKSUM</key>
        <value>FBDDDA576EC2A0907FECA5F776C07095</value>
      </UrlParams>
    </Redirect>
  </WebPaymentResponse>
</SinglePaymentResponse>
```

## Redirect To PayGate

The data returned in the “Redirect” message the URL and additional data that must be POSTed to the URL. This data could include the PayGate ID, PayRequest ID or Transaction ID, but it is not limited to this.

There are 2 ways in which a merchant can redirect a customer to PayGate. This can either be via a redirect or an HTML IFRAME.

If the merchant makes use of a standard redirect, then they would use a normal form post containing the Keys and Values returned in the [Redirect Response](#) message.

If the merchant makes use of a HTML IFRAME, then they will need to make sure that the Keys and Values returned in the Redirect Response message are posted to the IFRAME. A GET can't be used for posting the data to PayGate.

**Important :** Please note that the data returned in the “Redirect” message is dynamic based on the Redirect URL and KeyValuePairs returned. Please iterate through each KeyValuePair to retrieve the required data. The example below is one possible set of KeyValuePairs that can be returned and should not be considered the only possible response and format.

### Example

Assuming the following values are returned in the “Redirect” message:

|  |   |
|--|---|
| URL (URL attribute)                        | https://secure.paygate.co.za/payhost/redirect.trans |
| PayGate ID (PAYGATE_ID attribute)          | 10011013800   |
| Pay Request ID (PAY_REQUEST_ID attribute): | 43DF55EE-B30E-295F-1BF2-20EF76E78BEE                |
| Checksum (CHECKSUM attribute):             | 580554987e830511864189533cec1a39                    |

The Form and IFRAME that is returned to the customer’s browser would be:

```
<form action="url of page" name="frmSubmit" id="frmSubmit" method="post" target="iframeID">.
  <input type="hidden" name="PAYGATE_ID" value="10011013800" />
  <input type="hidden" name="PAY_REQUEST_ID" value="43DF55EE-B30E-295F-1BF2-20EF76E78BEE" />
  <input type="hidden" name="CHECKSUM" value="580554987e830511864189533cec1a39" />
</form>
```

```
<iframe id="iframeID" scrollbar="auto" ></iframe>
```

## Redirect the client back to the merchant's web site

Once the customer has either completed the authentication process or completed the payment (depending on the method chosen), PayGate will redirect the customer back to the merchants website. The URL specified in the returnUrl attribute in the original payment request message is where the customer's browser will be redirected. The results of the transaction are posted in hidden fields in an HTML form:

| Field  | Type        | Required |
|--|-------------|----------|
| <b>PAY_REQUEST_ID</b><br>This field contains the PayGate unique reference number for the transaction. It will be the same as passed in the secure message.<br><input type="hidden" name="PAY_REQUEST_ID" value="7B44FC55-CA90-1922-B32D-00DD010772DB"> | Varchar(36) | Yes      |
| <b>TRANSACTION_STATUS</b><br>The final status of the transaction. Refer to the Transaction Status table for a list of possible values.<br><input type="hidden" name="TRANSACTION_STATUS" value="1">  | Number(1)   | Yes      |
| <b>CHECKSUM</b><br>This field contains a calculated MD5 hash based on the values of the PAYGATE_ID, PAY_REQUEST_ID, TRANSACTION_STATUS, REFERENCE fields and a key. Refer to the Checksum Example below for an example of this calculation.            | Varchar(32) | Yes      |

### Checksum Example

Concatenate the PAYGATE\_ID, PAY\_REQUEST\_ID, TRANSACTION\_STATUS, REFERENCE AND KEY (no separator characters) to form the source of the MD5 hash:

PAYGATE\_ID+PAY\_REQUEST\_ID+TRANSACTION\_STATUS+REFERENCE+KEY

Assuming the KEY is 'secret', the following scenario is possible:

100110138007B44FC55-CA90-1922-B32D-00DD010772DB1Customer1secret

The MD5 hash value for this transaction would be: abbf481a0cda7c08f23183b4a4dcb462

<input type="hidden" name="CHECKSUM" value="abbf481a0cda7c08f23183b4a4dcb462">

## 3D Secure using PayGate's MPI – more redirect detail

If you sent through a payment type of Credit card (containing all card details) and you received a "Redirect" message, it means MasterCard SecureCode / Verified-by-Visa authentication is required. The customer's browser must be re-directed as described in the "Redirect To PayGate" section.

### **Completed 3D Secure or Redirect Solution transaction notification - (If a NotifyUrl has been specified)**

When/if the customer completes either the authentication process or in some cases when the payment method chosen requires a redirect or in some cases when the payment method is suited to an 'asynchronous' process, PayGate will call the merchant's website in order to advise the merchant what the result was. The URL specified in the NotifyUrl attribute in the original payment request message is where the notification will be posted to. The format is identical to what is decided in the "Redirect the client back to the merchant's web site" section.

In the case of a completed 3D Secure or Redirect Solution transaction, PayGate will attempt to post the notification before redirecting the customer back to the Merchant's website. If this post is not successful, then the customer will be redirected anyway (and PayGate will attempt a further 3 times in the background).

In the case of an 'asynchronous' process transaction, if/when PayGate receives a response from the financial service provider stating that the transaction has been completed (or that the transaction status has changed), then PayHost will notify the merchant via the 'NotifyUrl' provided by the merchant.

A notification will also be sent for all transactions not completed within a reasonable time period (generally 30 minutes), i.e. If the customer closes the browser during the authentication process or at any point while PayGate is processing the transaction. In these circumstances the merchant website (at the address specified by the NotifyUrl) will receive a notification after 30 minutes to indicate an incomplete transaction. The NotifyUrl must return the value 'OK' to indicate that the post was received. If PayHost cannot contact the merchant's NotifyUrl and/or if an 'OK' reply is not received, then PayHost will try to repost the response 2 more times at 30 minute intervals and if no response is received no further attempts to re-post the data will take place.

## PayGate Hosted Payment Page

The PayGate Hosted Payment Page allows a Merchant to make use of PayGate's secure payment page. Through PayGate's Secure Payment Page a merchant does not need to integrate to a specific method. The Merchant just redirects the Customer to the PayGate payment page where the Customer will be presented with a list of all Payment Methods that the Merchant has subscribed to.

## Single Payout Request

Payout requests allow a Merchant to process pay-outs to their customers. Please note that pay-outs can only be done if the functionality is supported by the relevant acquirer or payment method.

PayGate offers the following "Payout Request Types":

- CardPayout

## Card Payout

### Card Payout Request (CardPayoutRequest)

| Field  | Type                | Required |
|--|---------------------|----------|
| <b>Account</b><br>PayGate account details                            | PayGateAccountType  | Yes      |
| <b>Customer</b><br>Customer details                                  | PersonType          | Yes      |
| <b>CardNumber</b><br>Card number                                     | Number(19)          | Yes      |
| <b>CardExpiryDate</b><br>Expiry date<br>e.g. Jan 2020 will be 012020 | Number(6)<br>mmyyyy | Yes      |
| <b>Order</b><br>Contains a complex type of order fields              | OrderType           | Yes      |

### Card Payout Response (CardPayoutResponse)

| Field  | Type       |
|--|------------|
| <b>Status</b><br>A full transaction detail response will be returned | StatusType |

## Example of Card Payout Request and Response:

### Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:pay="http://www.paygate.co.za/PayHOST">
  <soapenv:Header/>
  <soapenv:Body>
    <pay:SinglePayoutRequest>
      <pay:CardPayoutRequest>
        <pay:Account>
          <pay:PayGateId>10011013800</pay:PayGateId>
          <pay:Password>test</pay:Password>
        </pay:Account>
        <pay:Customer>
          <pay:FirstName>Joe</pay:FirstName>
          <pay:LastName>Soap</pay:LastName>
          <pay:Email>joes@example.com</pay:Email>
        </pay:Customer>
        <pay:CardNumber>4000000000000002</pay:CardNumber>
        <pay:CardExpiryDate>052015</pay:CardExpiryDate>
        <pay:Order>
          <pay:MerchantOrderId>order-1234</pay:MerchantOrderId>
          <pay:Currency>ZAR</pay:Currency>
          <pay:Amount>100</pay:Amount>
        </pay:Order>
      </pay:CardPayoutRequest>
    </pay:SinglePayoutRequest>
  </soapenv:Body>
</soapenv:Envelope>
```

### Response

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <ns2:SinglePayoutResponse xmlns:ns2="http://www.paygate.co.za/PayHOST">
      <ns2:CardPayoutResponse>
        <ns2:Status>
          <ns2:TransactionId>28790220</ns2:TransactionId>
          <ns2:Reference>order-1234</ns2:Reference>
          <ns2:StatusName>Completed</ns2:StatusName>
          <ns2:PayRequestId>741B4BE0-5CCE-530C-901A-D9B691528C2D</ns2:PayRequestId>
          <ns2:TransactionStatusCode>0</ns2:TransactionStatusCode>
          <ns2:TransactionStatusDescription>Not Done</ns2:TransactionStatusDescription>
          <ns2:ResultCode>990006</ns2:ResultCode>
          <ns2:ResultDescription>Request for Payout Received</ns2:ResultDescription>
          <ns2:Currency>ZAR</ns2:Currency>
          <ns2:Amount>100</ns2:Amount>
          <ns2:PaymentType>
            <ns2:Method>CC</ns2:Method>
            <ns2:Detail>VISA</ns2:Detail>
          </ns2:PaymentType>
        </ns2:Status>
      </ns2:CardPayoutResponse>
    </ns2:SinglePayoutResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

## Single Vault Request

Vault requests allow merchants to manage what is stored by the PayVault tokenisation service. Please note that currently PayVault only supports the tokenisation of credit card data.

PayGate offers the following Vault Request Types:

- CardVault
- LookupVault
- DeleteVault

### Card Vault Request (CardVaultRequest)

| Field  | Type                | Required |
|--|---------------------|----------|
| <b>Account</b><br>PayGate account details                            | PayGateAccountType  | Yes      |
| <b>CardNumber</b><br>Card number                                     | Number(19)          | Yes      |
| <b>CardExpiryDate</b><br>Expiry date<br>e.g. Jan 2020 will be 012020 | Number(6)<br>mmyyyy | Yes      |

### Card Vault Response (CardVaultResponse)

| Field  | Type           |
|--|----------------|
| <b>StatusName</b><br>Status. Refer to the transaction status table.  | StatusNameType |
| <b>VaultId</b><br>The PayVault token GUID corresponding to the credit card number and expiry date that has been added to the database. | String         |

### Example of a CardVault Request and Response:

#### Request

```
<SingleVaultRequest xmlns="http://www.paygate.co.za/PayHOST">
  <CardVaultRequest>
    <Account>
      <PayGateId>10011013800</PayGateId>
      <Password>test</Password>
    </Account>
    <CardNumber>5200000000000015</CardNumber>
    <CardExpiryDate>112030</CardExpiryDate>
  </CardVaultRequest>
</SingleVaultRequest>
```

#### Response

```
SingleVaultResponse xmlns="http://www.paygate.co.za/PayHOST">
  <CardVaultResponse>
    <Status>
      <StatusName>Completed</StatusName>
      <VaultId>6eb998d9-b4e8-46b8-9772-90ecb644ab54</VaultId>
    </Status>
  </CardVaultResponse>
</SingleVaultResponse>
```

**Lookup Vault Request** (LookupVaultRequest)

| Field                                     | Type               | Required |
|---|--------------------|----------|
| <b>Account</b><br>PayGate account details | PayGateAccountType | Yes      |
| <b>VaultId</b><br>The PayVault token GUID | String             | Yes      |

**Lookup Vault Response** (LookupVaultResponse)

| Field  | Type                |
|--|---------------------|
| <b>StatusName</b><br>Status. Refer to the transaction status table.  | StatusNameType      |
| <b>CardNumber</b><br>The masked card number associated to the PayVault Token. The first 6 and last 4 digits of the card number will be returned. | Varchar(19)         |
| <b>CardExpiryDate</b><br>Expiry date<br>e.g. Jan 2020 will be 012020   | Number(6)<br>mmyyyy |

**Example of a LookupVault Request and Response:**
Request

```
<SingleVaultRequest xmlns="http://www.paygate.co.za/PayHOST">
  <LookUpVaultRequest>
    <Account>
      <PayGateId>10011013800</PayGateId>
      <Password>test</Password>
    </Account>
    <VaultId>c36a13e8-65a0-49fd-a12f-05fe78bf9eaa</VaultId>
  </LookUpVaultRequest>
</SingleVaultRequest>
```

Response

```
<SingleVaultResponse xmlns="http://www.paygate.co.za/PayHOST">
  <LookUpVaultResponse>
    <Status>
      <StatusName>Completed</StatusName>
      <CardNumber>520000xxxxxx0015</CardNumber>
      <CardExpiryDate>112030</CardExpiryDate>
    </Status>
  </LookUpVaultResponse>
</SingleVaultResponse>
```

**Delete Vault Request** (DeleteVaultRequest)

| Field                                     | Type               | Required |
|---|--------------------|----------|
| <b>Account</b><br>PayGate account details | PayGateAccountType | Yes      |
| <b>VaultId</b><br>The PayVault token GUID | String             | Yes      |

**Delete Vault Response** (DeleteVaultResponse)

| Field   | Type           |
|---|----------------|
| <b>StatusName</b><br>Status. Refer to the transaction status table. | StatusNameType |

**Example of a DeleteVault Request and Response:**
Request

```
<SingleVaultRequest xmlns="http://www.paygate.co.za/PayHOST">
  <DeleteVaultRequest>
    <Account>
      <PayGateId>10011013800</PayGateId>
      <Password>test</Password>
    </Account>
    <VaultId>84a49326-d088-497f-9c06-dfe8445c7be2</VaultId>
  </DeleteVaultRequest>
</SingleVaultRequest>
```

Response

```
<SingleVaultResponse xmlns="http://www.paygate.co.za/PayHOST">
  <DeleteVaultResponse>
    <Status>
      <StatusName>Completed</StatusName>
    </Status>
  </DeleteVaultResponse>
</SingleVaultResponse>
```

## Follow Up Request

Follow up requests allow a Merchant multiple options after processing has taken place. These can be either Settling a transaction (if a merchant is not setup for AutoSettle), refunding a transaction, querying a transaction status, etc.

PayGate offer the following "Follow Up Request Types":

- Query
- Void
- Refund
- Settlement

## Query

The Query function allows you to query the final status of previously processed transactions. The Query function will accept a PayRequestId, TransId or a Reference as a search key.

### Query Request (QueryRequestType)

| Field   | Type               | Required |
|---|--------------------|----------|
| <b>Account</b><br>PayGate account details   | PayGateAccountType | Yes      |
| <b>PayRequestId</b><br>The PayRequestId is a GUID allocated by PayHost to the transaction request received in the Redirect step should a transaction require it.<br><i>Note: Either PayRequestId, MerchantOrderId or TransId must be populated when doing a Query Request</i>   | Varchar(36)        | Yes*     |
| <b>MerchantOrderId</b><br>This is the reference number generated by your system for the original authorisation e.g. your Customer, Invoice or Order Number.<br>If your <b>MerchantOrderId</b> is not a unique number, then PayHost will return the 5 most recent transactions with a matching <b>MerchantOrderId</b> .  | Varchar(80)        | Yes*     |
| <b>TransId</b><br>The unique reference number assign by PayGate to the original transaction.  | Number(11)         | Yes*     |
| <b>TransactionType</b><br>This optional query parameter can be used along with the required query parameter to specify the type of transaction being queried. If not included in the request the default TransactionType is Authorisation.<br><br>The TransactionType value can be one of the following:<br>- Authorisation<br>- Settlement<br>- Refund<br>- Payout<br>- Purchase (This will provide results for alternative payment methods) | Varchar(20)        | No       |

**\* Important Note: Only one of the PayRequestID, MerchantOrderID or TransID values is required in the Query request. If none are included the request will return an error.**

**Query Response** (QueryResponse)

| Field  | Type       |
|--|------------|
| <b>Status</b><br>A full transaction detail response will be returned | StatusType |

**Examples of a Query Request and Response:**

Request

```
<SingleFollowUpRequest>
  <QueryRequest>
    <Account>
      <PayGateId>10011013800</PayGateId>
      <Password>test</Password>
    </Account>
    <PayRequestId>6B739421-C177-903F-B23A-4BC1F09AB791</PayRequestId>
  </QueryRequest>
</SingleFollowUpRequest>
```

Response

```
<SingleFollowUpResponse>
  <QueryResponse>
    <Status>
      <TransactionId>2920562</TransactionId>
      <Reference>INV101</Reference>
      <AcquirerCode>00</AcquirerCode>
      <StatusName>Completed</StatusName>
      <AuthCode>301948</AuthCode>
      <PayRequestId>6B739421-C177-903F-B23A-4BC1F09AB791</PayRequestId>
      <TransactionStatusCode>1</TransactionStatusCode>
      <TransactionStatusDescription>Approved</TransactionStatusDescription>
      <ResultCode>990017</ResultCode>
      <ResultDescription>Auth Done</ResultDescription>
      <Currency>ZAR</Currency>
      <Amount>100</Amount>
      <RiskIndicator>AX</RiskIndicator>
      <PaymentType>
        <Method>CC</Method>
        <Detail>Visa</Detail>
      </PaymentType>
    </Status>
  </QueryResponse>
</SingleFollowUpResponse>
```

## Void

The void function allows merchants to void transactions that are not yet settled or refunded. Settlements and Refunds can only be stopped using the Void request if they have not yet been submitted to the acquiring bank.

### Transaction Type Details (*TransactionType*)

|            |
|------------|
| Settlement |
| Refund     |

### Void Request (*VoidRequest*)

| Field  | Type               | Required |
|--|--------------------|----------|
| <b>Account</b><br>PayGate account details  | PayGateAccountType | Yes      |
| <b>TransactionId</b><br>The unique reference number assign by PayGate to the original Authorisation transaction. | TransactionId      | Yes      |
| <b>TransactionType</b><br>Transaction type detail of the transaction you want to void e.g. if you want to stop a | TransactionType    | Yes      |

### Void Response (*VoidResponse*)

| Field  | Type       |
|--|------------|
| <b>Status</b><br>A full transaction detail response will be returned | StatusType |

### Example of Void Request and Response:

#### Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:pay="http://www.paygate.co.za/PayHOST">
  <soapenv:Header/>
  <soapenv:Body>
    <pay:SingleFollowUpRequest>
      <pay:VoidRequest>
        <pay:Account>
          <pay:PayGateId>10011013800</pay:PayGateId>
          <pay:Password>test</pay:Password>
        </pay:Account>
        <pay:TransactionId>28790224</pay:TransactionId>
        <pay:TransactionType>Settlement</pay:TransactionType>
      </pay:VoidRequest>
    </pay:SingleFollowUpRequest>
  </soapenv:Body>
</soapenv:Envelope>
```

#### Response

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <ns2:SingleFollowUpResponse xmlns:ns2="http://www.paygate.co.za/PayHOST">
      <ns2:VoidResponse>
        <ns2:Status>
          <ns2:TransactionId>28790224</ns2:TransactionId>
          <ns2:StatusName>Completed</ns2:StatusName>
          <ns2:StatusDetail>Settlement Voided</ns2:StatusDetail>
          <ns2:TransactionStatusCode>7</ns2:TransactionStatusCode>
          <ns2:TransactionStatusDescription>Settlement Voided</ns2:TransactionStatusDescription>
          <ns2:Currency>ZAR</ns2:Currency>
          <ns2:Amount>100</ns2:Amount>
          <ns2:DateTime>2014-10-02T16:16:14.577+02:00</ns2:DateTime>
        </ns2:Status>
      </ns2:VoidResponse>
    </ns2:SingleFollowUpResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

## Settlement

This function allows the merchant to settle an authorisation where AutoSettle is turned off.

### Settlement Request (SettlementRequest)

| Field  | Type               | Required |
|--|--------------------|----------|
| <b>Account</b><br>PayGate account details  | PayGateAccountType | Yes      |
| <b>TransactionId</b><br>The unique reference number assign by PayGate to the original Authorisation transaction.   | TransactionId      | Yes*     |
| <b>MerchantOrderId</b><br>This is the reference number generated by your system for the original authorisation e.g. your Customer, Invoice or Order Number | Varchar(80)        | Yes*     |

**\* Important Note: Either the TransactionId or MerchantOrderId value is required in a Settlement request. Both credentials are not required, and including both will result in an error.**

### Settlement Response (SettlementResponse)

| Field  | Type       |
|--|------------|
| <b>Status</b><br>A full transaction detail response will be returned | StatusType |

### Example of Refund Request and Response:

#### Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:pay="http://www.paygate.co.za/PayHOST">
  <soapenv:Header/>
  <soapenv:Body>
    <pay:SingleFollowUpRequest>
      <pay:SettlementRequest>
        <pay:Account>
          <pay:PayGateId>10011013800</pay:PayGateId>
          <pay>Password>test</pay>Password>
        </pay:Account>
        <pay:TransactionId>28790224</pay:TransactionId>
      </pay:SettlementRequest>
    </pay:SingleFollowUpRequest>
  </soapenv:Body>
</soapenv:Envelope>
```

Response

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <ns2:SingleFollowUpResponse xmlns:ns2="http://www.paygate.co.za/PayHOST">
      <ns2:SettlementResponse>
        <ns2:Status>
          <ns2:TransactionId>28790227</ns2:TransactionId>
          <ns2:Reference>pgdddtest</ns2:Reference>
          <ns2:StatusName>Completed</ns2:StatusName>
          <ns2:TransactionStatusCode>5</ns2:TransactionStatusCode>
          <ns2:TransactionStatusDescription>Received by Paygate</ns2:TransactionStatusDescription>
          <ns2:ResultCode>990004</ns2:ResultCode>
          <ns2:ResultDescription>Request for Settlement Received</ns2:ResultDescription>
        </ns2:Status>
      </ns2:SettlementResponse>
    </ns2:SingleFollowUpResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

## Refund

This function allows the merchant to refund a transaction that has already been settled.

### **Refund Request** (RefundRequest)

| Field  | Type               | Required |
|--|--------------------|----------|
| <b>Account</b><br>PayGate account details  | PayGateAccountType | Yes      |
| <b>TransactionId</b><br>The unique reference number assign by PayGate to the original Authorisation transaction.   | TransactionId      | Yes*     |
| <b>Amount</b><br>Transaction amount in cents.<br>e.g. R32.95 would be specified as 3295  | Number(11)         | Yes      |
| <b>MerchantOrderId</b><br>This is your reference number for use by your internal systems for the original authorisation.<br>e.g. Your Customer, Invoice or Order Number.                                   | Varchar(80)        | Yes*     |
| <b>Reference</b><br>This is your reference number for use by your internal systems. We return the MerchantOrderId you passed to us in the payment request.<br>E.g. Your Customer, Invoice or Order Number. | Varchar(80)        | No       |

**\* Important Note: A refund can be requested for a settled transaction using either the TransactionID or MerchantOrderID of the original authorisation.**

### **Refund Response** (RefundResponse)

| Field  | Type       |
|--|------------|
| <b>Status</b><br>A full transaction detail response will be returned | StatusType |

## Example of Refund Request and Response:

### Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:pay="http://www.paygate.co.za/PayHOST">
  <soapenv:Header/>
  <soapenv:Body>
    <pay:SingleFollowUpRequest>
      <pay:RefundRequest>
        <pay:Account>
          <pay:PayGateId>10011013800</pay:PayGateId>
          <pay:Password>test</pay:Password>
        </pay:Account>
        <pay:TransactionId>28790224</pay:TransactionId>
        <pay:Amount>100</pay:Amount>
      </pay:RefundRequest>
    </pay:SingleFollowUpRequest>
  </soapenv:Body>
</soapenv:Envelope>
```

### Response

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <ns2:SingleFollowUpResponse xmlns:ns2="http://www.paygate.co.za/PayHOST">
      <ns2:RefundResponse>
        <ns2:Status>
          <ns2:TransactionId>28790228</ns2:TransactionId>
          <ns2:Reference>pgdddtest</ns2:Reference>
          <ns2:StatusName>Completed</ns2:StatusName>
          <ns2:TransactionStatusCode>5</ns2:TransactionStatusCode>
          <ns2:TransactionStatusDescription>Received by Paygate</ns2:TransactionStatusDescription>
          <ns2:ResultCode>990005</ns2:ResultCode>
          <ns2:ResultDescription>Request for Refund Received</ns2:ResultDescription>
        </ns2:Status>
      </ns2:RefundResponse>
    </ns2:SingleFollowUpResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

## Testing

There are 2 PayGate IDs that can be used for testing:

The following account details should be used for testing credit card payments with 3D Secure using PayGate's MPI:

PayGate ID: **10011072130**  
PayHost Password: **test**

The following account details should be used for testing credit card payments without 3D Secure:

PayGate ID: **10011064270**  
PayHost Password: **test**

PayVault tokenisation of credit card numbers as well as processing of requests using tokens is supported for both of the accounts listed above.

Please refer to the table below when testing to simulate predictable results:

| Card Brand  | Card Number      | Risk Indicator           |
|---|------------------|--------------------------|
| <b>Approved Transactions. RESULT_CODE = 990017; TRANSACTION_STATUS = 1.</b>           |                  |                          |
| Visa  | 4000000000000002 | Authenticated (AX) *     |
| MasterCard  | 5200000000000015 | Authenticated (AX)       |
| American Express  | 378282246310005  | Not Authenticated (NX)   |
| <b>Insufficient Funds Transactions. RESULT_CODE = 900003; TRANSACTION_STATUS = 2.</b> |                  |                          |
| MasterCard  | 5200000000000023 | Not Authenticated (NX) * |
| Visa  | 4000000000000028 | Not Authenticated (NX)   |
| American Express  | 371449635398431  | Not Authenticated (NX)   |
| <b>Declined Transactions. RESULT_CODE = 900007; TRANSACTION_STATUS = 2.</b>           |                  |                          |
| Visa  | 4000000000000036 | Authenticated (AX) *     |
| MasterCard  | 5200000000000049 | Authenticated (AX) *     |
| Diners Club   | 30569309025904   | Not Applicable (XX)      |
| <b>Invalid Card Number. RESULT_CODE = 900004; TRANSACTION_STATUS = 2.</b>             |                  |                          |
| For credit card payment method - all other card numbers                               |                  | Not Applicable (XX)      |
| <b>Unprocessed Transactions. RESULT_CODE = 990022; TRANSACTION_STATUS = 0.</b>        |                  |                          |
| MasterCard  | 5200000000000064 | Not Applicable (XX)      |
| <i>Expiry Date must be in the future; Card Holder &amp; CVV can be made up.</i>       |                  |                          |

\* = Using these card numbers will allow you to test the MasterCard SecureCode / Verified-by-Visa authentication process.

## Miscellaneous Information

### MasterCard SecureCode & Verified-by-Visa

#### **What is SecureCode and Verified by Visa?**

SecureCode and Verified by Visa is a MasterCard and Visa initiative to reduce online credit card transaction fraud. (It applies to Master and Visa cards only).

The Visa implementation is referred to as Verified by Visa or V-by-V.

The MasterCard implementation is referred to as MasterCard Secure Code.

#### **How does SecureCode and Verified by Visa benefit the merchant?**

It significantly reduces the risk of fraudulent transactions, and moves the risk of certain charge backs from the merchant to the card holder or the Issuing Bank.

(Note – there are instances where the charge back risk remains with the merchant – this is detailed in the flowchart below).

#### **How Does SecureCode and Verified by Visa work?**

When a purchase is made online, the cardholder will be re-directed from the secure PayGate payment page, to the issuing bank's (cardholder's bank) SecureCode and Verified by Visa authentication page. Here the cardholder will be required to key in his/her authentication details (e.g. secret PIN code). The Issuing Bank validates this code and returns an 'OK' or 'not OK' response to PayGate. If PayGate receives an 'OK' response then we pass the transaction on to the Acquiring Bank for Authorisation. If the response is 'not OK' then the transaction is 'Declined' up front by PayGate.

It should however be noted that not all Issuing Banks will force their cardholders to register for this service. Where this is the case, a re-direct will still take place to the issuing bank's website but in this case the transaction will not be authenticated. The message code returned will however indicate that you as a merchant attempted to authenticate the transaction and that the issuing bank is not registered for the service. The transaction will be processed as a SecureCode and Verified by Visa transaction i.e. the risk will be passed to the issuing bank.

#### **What about the other cards (AMEX, Diners etc.)?**

These cards are not authenticated via the SecureCode and Verified by Visa process. At this time transaction risk for purchases made with cards other than Master and Visa, will remain with the merchant.

## Appendix A : Codes & Descriptions

### Result Codes

| Code  | Description  | Comment   |
|---|--|---|
| <b>Credit Card Errors</b> – These RESULT_CODES are returned if the transaction cannot be authorised due to a problem with the card. The TRANSACTION_STATUS will be <b>2</b> . |  |   |
| 900001  | Call for Approval  |   |
| 900002  | Card Expired   |   |
| 900003  | Insufficient Funds   |   |
| 900004  | Invalid Card Number  |   |
| 900005  | Bank Interface Timeout   | Indicates a communications failure between the banks systems.   |
| 900006  | Invalid Card   |   |
| 900007  | Declined   |   |
| 900009  | Lost Card  |   |
| 900010  | Invalid Card Length  |   |
| 900011  | Suspected Fraud  |   |
| 900012  | Card Reported As Stolen  |   |
| 900013  | Restricted Card  |   |
| 900014  | Excessive Card Usage   |   |
| 900015  | Card Blacklisted   |   |
| 900017  | Requested and Paid Amount Mismatch                             | Indicates the amount of an M-Pesa payment does not match the original transaction amount, either more or less.  |
| 900019  | Card vault out of scope  |   |
| 900207  | Declined; authentication failed                                | Indicates the cardholder did not enter their MasterCard SecureCode / Verified by Visa password correctly.   |
| 900208  | Not enrolled for authentication                                | Indicates that the card used to make the payment was not enrolled for 3D Secure authentication. Only applicable when PayProtector ECI Blocking is enabled.        |
| 990020  | Auth Declined  |   |
| 991001  | Invalid expiry date  |   |
| 991002  | Invalid Amount   |   |
| <b>Transaction Successful</b> – Indicates the transaction was approved. TRANSACTION_STATUS will be <b>1</b> .   |  |   |
| 990017  | Auth Done  |   |
| <b>Communication Errors</b> – These RESULT_CODES are returned if the transaction cannot be completed due to an unexpected error. TRANSACTION_STATUS will be <b>0</b> .        |  |   |
| 900205  | Unexpected authentication result (phase 1)                     |   |
| 900206  | Unexpected authentication result (phase 1)                     |   |
| 990001  | Could not insert into Database                                 |   |
| 990022  | Bank not available   |   |
| 990053  | Error processing transaction                                   |   |
| <b>Miscellaneous</b> - Unless otherwise noted, the TRANSACTION_STATUS will be <b>0</b> .  |  |   |
| 900209  | Transaction verification failed (phase 2)                      | Indicates the verification data returned from MasterCard SecureCode / Verified-by-Visa has been altered.  |
| 900210  | Authentication complete; transaction must be restarted         | Indicates that the MasterCard SecureCode / Verified-by-Visa transaction has already been completed. Most likely caused by a customer clicking the refresh button. |
| 990024  | Duplicate Transaction Detected. Please check before submitting |   |
| 990028  | Transaction cancelled  | Customer clicks the 'Cancel' button on the payment page.  |

## Transaction Status

| Transaction Code | Description         |
|------------------|---------------------|
| 0                | Not Done            |
| 1                | Approved            |
| 2                | Declined            |
| 3                | Cancelled           |
| 4                | Cancelled           |
| 5                | Received by PayGate |
| 7                | Settlement Voided   |

## MasterCard SecureCode / Verified by Visa Authentication Indicator

| Code | Description       | Comment  |
|------|-------------------|--|
| N    | Not Authenticated | Authentication was attempted but NOT successful. Merchant does NOT receive charge back protection for this transaction.  |
| A    | Authenticated     | Authentication was attempted and was successful. Merchant does receive charge back protection for this transaction.  |
| X    | Not Applicable    | Authentication processing NOT enabled on PayGate account or unexpected error in authentication process. Merchant does NOT receive charge back protection for this transaction. |

## Payment Method Codes

| Pay Method | Description   |
|------------|---------------|
| CC         | Credit Card   |
| DC         | Debit Card    |
| EW         | eWallet       |
| BT         | Bank Transfer |
| CV         | Cash Voucher  |
| PC         | Pre-Paid Card |

## Locale Codes

|       |                         |       |                          |
|-------|-------------------------|-------|--------------------------|
| Af    | Afrikaans               | Sq    | Albanian                 |
| ar-sa | Arabic (Saudi Arabia)   | ar-iq | Arabic (Iraq)            |
| ar-eg | Arabic (Egypt)          | ar-ly | Arabic (Libya)           |
| ar-dz | Arabic (Algeria)        | ar-ma | Arabic (Morocco)         |
| ar-tn | Arabic (Tunisia)        | ar-om | Arabic (Oman)            |
| ar-ye | Arabic (Yemen)          | ar-sy | Arabic (Syria)           |
| ar-jo | Arabic (Jordan)         | ar-lb | Arabic (Lebanon)         |
| ar-kw | Arabic (Kuwait)         | ar-ae | Arabic (U.A.E.)          |
| ar-bh | Arabic (Bahrain)        | ar-qa | Arabic (Qatar)           |
| Eu    | Basque                  | bg    | Bulgarian                |
| Be    | Belarusian              | ca    | Catalan                  |
| zh-tw | Chinese (Taiwan)        | zh-cn | Chinese (PRC)            |
| zh-hk | Chinese (Hong Kong SAR) | zh-sg | Chinese (Singapore)      |
| Hr    | Croatian                | cs    | Czech                    |
| Da    | Danish                  | nl    | Dutch (Standard)         |
| nl-be | Dutch (Belgium)         | en    | English                  |
| en-us | English (United States) | en-gb | English (United Kingdom) |
| en-au | English (Australia)     | en-ca | English (Canada)         |
| en-nz | English (New Zealand)   | en-ie | English (Ireland)        |
| en-za | English (South Africa)  | en-jm | English (Jamaica)        |
| En    | English (Caribbean)     | en-bz | English (Belize)         |
| en-tt | English (Trinidad)      | et    | Estonian                 |
| fo    | Faeroese                | fa    | Farsi                    |

|       |                                |       |                       |
|-------|--------------------------------|-------|-----------------------|
| fi    | Finnish                        | fr    | French (Standard)     |
| fr-be | French (Belgium)               | fr-ca | French (Canada)       |
| fr-ch | French (Switzerland)           | fr-lu | French (Luxembourg)   |
| gd    | Gaelic (Scotland)              | ga    | Irish                 |
| de    | German (Standard)              | de-ch | German (Switzerland)  |
| de-at | German (Austria)               | de-lu | German (Luxembourg)   |
| de-li | German (Liechtenstein)         | el    | Greek                 |
| he    | Hebrew                         | hi    | Hindi                 |
| hu    | Hungarian                      | is    | Icelandic             |
| id    | Indonesian                     | it    | Italian (Standard)    |
| it-ch | Italian (Switzerland)          | ja    | Japanese              |
| ko    | Korean                         | ko    | Korean (Johab)        |
| lv    | Latvian                        | lt    | Lithuanian            |
| mk    | Macedonian (FYROM)             | ms    | Malaysian             |
| mt    | Maltese                        | no    | Norwegian (Bokmal)    |
| no    | Norwegian (Nynorsk)            | pl    | Polish                |
| pt-br | Portuguese (Brazil)            | pt    | Portuguese (Portugal) |
| rm    | Rhaeto-Romanic                 | ro    | Romanian              |
| ro-mo | Romanian (Republic of Moldova) | ru    | Russian               |
| ru-mo | Russian (Republic of Moldova)  | sz    | Sami (Lappish)        |
| sr    | Serbian (Cyrillic)             | sr    | Serbian (Latin)       |
| sk    | Slovak                         | sl    | Slovenian             |
| sb    | Sorbian                        | es    | Spanish (Spain)       |
| es-mx | Spanish (Mexico)               | es-gt | Spanish (Guatemala)   |
| es-cr | Spanish (Costa Rica)           | es-pa | Spanish (Panama)      |
| es-do | Spanish (Dominican Republic)   | es-ve | Spanish (Venezuela)   |
| es-co | Spanish (Colombia)             | es-pe | Spanish (Peru)        |
| es-ar | Spanish (Argentina)            | es-ec | Spanish (Ecuador)     |
| es-cl | Spanish (Chile)                | es-uy | Spanish (Uruguay)     |
| es-py | Spanish (Paraguay)             | es-bo | Spanish (Bolivia)     |
| es-sv | Spanish (El Salvador)          | es-hn | Spanish (Honduras)    |
| es-ni | Spanish (Nicaragua)            | es-pr | Spanish (Puerto Rico) |
| sx    | Sutu                           | sv    | Swedish               |
| sv-fi | Swedish (Finland)              | th    | Thai                  |
| ts    | Tsonga                         | tn    | Tswana                |
| tr    | Turkish                        | uk    | Ukrainian             |
| ur    | Urdu                           | ve    | Venda                 |
| vi    | Vietnamese                     | xh    | Xhosa                 |
| ji    | Yiddish                        | zu    | Zulu                  |

## Country and Currency codes

| Country        | Country Code | Currency       | Currency Code |
|----------------|--------------|----------------|---------------|
| Afghanistan    | AFG          | Afghani        | AFA           |
| Albania        | ALB          | Lek            | ALL           |
| Algeria        | DZA          | Algerian Dinar | DZD           |
| American Samoa | ASM          | U.S. Dollar    | USD           |
| Andorra        | AND          | Euro           | EUR           |
| Angola         | AGO          | Kwanza         | AOA           |

|                                |     |                          |     |
|--------------------------------|-----|--------------------------|-----|
| Anguilla                       | AIA | E. Caribbean Dollar      | XCD |
| Antarctica                     | ATA | Norwegian Krone          | NOK |
| Antigua and Barbuda            | ATG | E. Caribbean Dollar      | XCD |
| Argentina                      | ARG | Argentine Peso           | ARS |
| Armenia                        | ARM | Armenian Dram            | AMD |
| Aruba                          | ABW | Aruban Guilder           | AWG |
| Australia                      | AUS | Australian Dollar        | AUD |
| Austria                        | AUT | Euro                     | EUR |
| Azerbaijan                     | AZE | Azerbaijan Manat         | AZM |
| Bahamas                        | BHS | Bahamian Dollar          | BSD |
| Bahrain                        | BHR | Bahraini Dinar           | BHD |
| Bangladesh                     | BGD | Taka                     | BDT |
| Barbados                       | BRB | Barbados Dollar          | BBD |
| Belarus                        | BLR | Belarussian Ruble        | BYR |
| Belgium                        | BEL | Euro                     | EUR |
| Belize                         | BLZ | Belize Dollar            | BZD |
| Benin                          | BEN | CFA Franc BCEAO          | XOF |
| Bermuda                        | BMU | Bermudian Dollar         | BMD |
| Bhutan                         | BTN | Indian Rupee             | INR |
| Bolivia                        | BOL | Boliviano                | BOB |
| Bosnia and Herzegovina         | BIH | Bosnian Convertible Mark | BAM |
| Botswana                       | BWA | Pula                     | BWP |
| Bouvet Is.                     | BVT | Norwegian Krone          | NOK |
| Brazil                         | BRA | Brazilian Real           | BRL |
| British Indian Ocean Territory | IOT | U.S. Dollar              | USD |
| British Virgin Is.             | VGB | U.S. Dollar              | USD |
| Brunei Darussalam              | BRN | Brunei Dollar            | BND |
| Bulgaria                       | BGR | Bulgarian Lev            | BGN |
| Burkina Faso                   | BFA | CFA Franc BCEAO          | XOF |
| Burundi                        | BDI | Burundi Franc            | BIF |
| Cambodia                       | KHM | Riel                     | KHR |
| Cameroon United Republic of    | CMR | CFA Franc BEAC           | XAF |
| Canada                         | CAN | Canadian Dollar          | CAD |
| Cape Verde Is.                 | CPV | Cape Verde Escudo        | CVE |
| Cayman Is.                     | CYM | Cayman Is. Dollar        | KYD |
| Central African Republic       | CAF | CFA Franc BEAC           | XAF |
| Chad                           | TCD | CFA Franc BEAC           | XAF |
| Chile                          | CHL | Chilean Peso             | CLP |
| China                          | CHN | Yuan Renminbi            | CNY |
| Christmas Is.                  | CXR | Australian Dollar        | AUD |
| Cocos (Keeling) Is.            | CCK | Australian Dollar        | AUD |
| Colombia                       | COL | Colombian Peso           | COP |
| Comoros                        | COM | Comoro Franc             | KMF |
| Congo                          | COG | CFA Franc BEAC           | XAF |
| Cook Is.                       | COK | New Zealand Dollar       | NZD |
| Costa Rica                     | CRI | Costa Rican Colon        | CRC |
| Côte d'Ivoire (Ivory Coast)    | CIV | CFA Franc BCEAO          | XOF |
| Croatia                        | HRV | Croatian Kuna            | HRK |
| Cuba                           | CUB | Cuban Peso               | CUP |
| Cyprus                         | CYP | Cyprus Pound             | CYP |
| Czech Republic                 | CZE | Czech Koruna             | CZK |

|   |     |                                      |     |
|---|-----|--------------------------------------|-----|
| Democratic Republic of the Congo (formerly Zaire) | COD | Franc Congolais (formerly New Zaire) | CDF |
| Denmark   | DNK | Danish Krone                         | DKK |
| Djibouti  | DJI | Djibouti Franc                       | DJF |
| Dominica  | DMA | E. Caribbean Dollar                  | XCD |
| Dominican Rep.                                    | DOM | Dominican Peso                       | DOP |
| East Timor  | TMP | Timor Escudo                         | TPE |
| Ecuador   | ECU | Sucre                                | ECS |
| Egypt   | EGY | Egyptian Pound                       | EGP |
| El Salvador                                       | SLV | U.S. Dollar                          | USD |
| Equatorial Guinea                                 | GNQ | CFA Franc BEAC                       | XAF |
| Eritrea   | ERI | Eritean Nakfa                        | ERN |
| Estonia   | EST | Kroon                                | EEK |
| Ethiopia  | ETH | Ethiopian Birr                       | ETB |
| European Monetary Cooperation Fund                | --  | European Currency Unit               | XEU |
| European Union                                    | --  | Euro                                 | EUR |
| Faeroe Is.  | FRO | Danish Krone                         | DKK |
| Falkland Is. (Malvinas)                           | FLK | Falkland Is. Pound                   | FKP |
| Fiji  | FJI | Fiji Dollar                          | FJD |
| Finland   | FIN | Euro                                 | EUR |
| France  | FRA | Euro                                 | EUR |
| France Metropolitan                               | FXX | Euro                                 | EUR |
| French Guiana                                     | GUF | Euro                                 | EUR |
| French Polynesia                                  | PYF | CFP Franc                            | XPF |
| French Southern Territory                         | ATF | Euro                                 | EUR |
| Gabon   | GAB | CFA Franc BEAC                       | XAF |
| Gambia  | GMB | Dalasi                               | GMD |
| Georgia   | GEO | Georgian Lari                        | GEL |
| Germany   | DEU | Deutsche Mark                        | DEM |
| Ghana   | GHA | Cedi                                 | GHC |
| Gibraltar   | GIB | Gibraltar Pound                      | GIP |
| Greece  | GRC | Euro                                 | EUR |
| Greenland   | GRL | Danish Krone                         | DKK |
| Grenada   | GRD | E. Caribbean Dollar                  | XCD |
| Guadeloupe  | GLP | Euro                                 | EUR |
| Guam  | GUM | U.S. Dollar                          | USD |
| Guatemala   | GTM | Quetzal                              | GTQ |
| Guinea  | GIN | Guinea Franc                         | GNF |
| Guinea—Bissau                                     | GNB | Guinea-Bissau Peso                   | GWP |
| Guyana  | GUY | Guyana Dollar                        | GYD |
| Haiti   | HTI | Gourde                               | HTG |
| Heard and McDonald Is.                            | HMD | Australian Dollar                    | AUD |
| Holy See (Vatican City State)                     | VAT | Euro                                 | EUR |
| Honduras  | HND | Lempira                              | HNL |
| Hong Kong China                                   | HKG | Hong Kong Dollar                     | HKD |
| Hungary   | HUN | Forint                               | HUF |
| Iceland   | ISL | Iceland Krona                        | ISK |
| India   | IND | Indian Rupee                         | INR |
| Indonesia   | IDN | Rupiah                               | IDR |
| Iran Airlines                                     | --  | Iranian Airline Rate                 | IRA |
| Iran Islamic Republic of                          | IRN | Iranian Rial                         | IRR |
| Iraq  | IRQ | Iraqi Dinar                          | IQD |

|   |     |                           |     |
|---|-----|---------------------------|-----|
| Ireland Republic of                                 | IRL | Euro                      | EUR |
| Israel  | ISR | New Israeli Shekel        | ILS |
| Italy   | ITA | Euro                      | EUR |
| Jamaica   | JAM | Jamaican Dollar           | JMD |
| Japan   | JPN | Yen                       | JPY |
| Jordan  | JOR | Jordanian Dinar           | JOD |
| Kazakhstan  | KAZ | Tenge                     | KZT |
| Kenya   | KEN | Kenyan Shilling           | KES |
| Kiribati  | KIR | Australian Dollar         | AUD |
| Korea Democratic People's Republic of (North Korea) | PRK | North Korean Won          | KPW |
| Korea Republic of                                   | KOR | Won                       | KRW |
| Kuwait  | KWT | Kuwaiti Dinar             | KWD |
| Kyrgyzstan  | KGZ | Som                       | KGS |
| Lao People's Democratic Republic                    | LAO | Kip                       | LAK |
| Latvia  | LVA | Latvian Lats              | LVL |
| Lebanon   | LBN | Lebanese Pound            | LBP |
| Lesotho   | LSO | Rand                      | ZAR |
| Liberia   | LBR | Liberian Dollar           | LRD |
| Libyan Arab Jamahiriya                              | LBY | Libyan Dinar              | LYD |
| Liechtenstein                                       | LIE | Swiss Franc               | CHF |
| Lithuania   | LTU | Lithuanian Litas          | LTL |
| Luxembourg  | LUX | Euro                      | EUR |
| Macau China   | MAC | Pataca                    | MOP |
| Macedonia the Former Yugoslav Republic of           | MKD | Denar                     | MKD |
| Madagascar  | MDG | Malagasy Franc            | MGF |
| Malawi  | MWI | Malawi Kwacha             | MWK |
| Malaysia  | MYS | Malaysian Ringgit         | MYR |
| Maldives  | MDV | Rufiyaa                   | MVR |
| Mali  | MLI | CFA Franc BCEAO           | XOF |
| Malta   | MLT | Maltese Lira              | MTL |
| Marshall Islands                                    | MHL | U.S. Dollar               | USD |
| Martinique  | MTQ | Euro                      | EUR |
| Mauritania  | MRT | Ouguiya                   | MRO |
| Mauritius   | MUS | Mauritius Rupee           | MUR |
| Mayotte   | MYT | Euro                      | EUR |
| Mexico  | MEX | Mexican Peso              | MXN |
| Micronesia  | FSM | U.S. Dollar               | USD |
| Moldova Republic of                                 | MDA | Moldovan Leu              | MDL |
| Monaco  | MCO | Euro                      | EUR |
| Mongolia  | MNG | Tugrik                    | MNT |
| Montenegro  |     | Yugoslavian New Dinar     | YUM |
| Montserrat  | MSR | E. Caribbean Dollar       | XCD |
| Morocco   | MAR | Moroccan Dirham           | MAD |
| Mozambique  | MOZ | Metical                   | MZM |
| Myanmar   | MMR | Kyat                      | MMK |
| Namibia   | NAM | Namibia Dollar            | NAD |
| Nauru   | NRU | Australian Dollar         | AUD |
| Nepal   | NPL | Nepalese Rupee            | NPR |
| Netherlands   | NLD | Euro                      | EUR |
| Netherlands Antilles                                | ANT | Nether. Antillian Guilder | ANG |
| New Caledonia                                       | NCL | CFP Franc                 | XPF |

|                                  |     |                               |     |
|----------------------------------|-----|-------------------------------|-----|
| New Zealand                      | NZL | New Zealand Dollar            | NZD |
| Nicaragua                        | NIC | Cordoba Oro                   | NIO |
| Niger                            | NER | CFA Franc BCEAO               | XOF |
| Nigeria                          | NGA | Naira                         | NGN |
| Niue                             | NIU | New Zealand Dollar            | NZD |
| Norfolk Is.                      | NFK | Australian Dollar             | AUD |
| Northern Mariana Islands         | MNP | U.S. Dollar                   | USD |
| Norway                           | NOR | Norwegian Krone               | NOK |
| Oman                             | OMN | Rial Omani                    | OMR |
| Pakistan                         | PAK | Pakistan Rupee                | PKR |
| Palau                            | PLW | U.S. Dollar                   | USD |
| Panama                           | PAN | Balboa                        | PAB |
| Papua New Guinea                 | PNG | Kina                          | PGK |
| Paraguay                         | PRY | Guarani                       | PYG |
| Peru                             | PER | Nuevo Sol                     | PEN |
| Philippines                      | PHL | Philippine Peso               | PHP |
| Pitcairn                         | PCN | New Zealand Dollar            | NZD |
| Poland                           | POL | Polish New Zloty              | PLN |
| Portugal                         | PRT | Euro                          | EUR |
| Puerto Rico                      | PRI | U.S. Dollar                   | USD |
| Qatar                            | QAT | Qatari Rial                   | QAR |
| Reunion                          | REU | Euro                          | EUR |
| Romania                          | ROM | Leu                           | ROL |
| Russian Federation               | RUS | Russian Ruble (International) | RUB |
| Russian Ruble (Domestic)         | RUS | Russian Ruble (Domestic)      | RUR |
| Rwanda                           | RWA | Rwanda Franc                  | RWF |
| Samoa                            | WSM | Tala                          | WST |
| San Marino                       | SMR | Euro                          | EUR |
| Sao Tome and Principe            | STP | Dobra                         | STD |
| Saudi Arabia                     | SAU | Saudi Riyal                   | SAR |
| Senegal                          | SEN | CFA Franc BCEAO               | XOF |
| Seychelles                       | SYC | Seychelles Rupee              | SCR |
| Sierra Leone                     | SLE | Leone                         | SLL |
| Singapore                        | SGP | Singapore Dollar              | SGD |
| Slovakia                         | SVK | Slovak Koruna                 | SKK |
| Slovenia                         | SVN | Tolar                         | SIT |
| So. Georgia and So. Sandwich Is. | SGS | Pound Sterling                | GBP |
| Solomon Is.                      | SLB | Solomon Is. Dollar            | SBD |
| Somalia                          | SOM | Somali Shilling               | SOS |
| South Africa                     | ZAF | Rand                          | ZAR |
| Spain                            | ESP | Euro                          | EUR |
| Sri Lanka                        | LKA | Sri Lanka Rupee               | LKR |
| St. Helena                       | SHN | St. Helena Pound              | SHP |
| St. Kitts-Nevis                  | KNA | E. Caribbean Dollar           | XCD |
| St. Lucia                        | LCA | E. Caribbean Dollar           | XCD |
| St. Pierre and Miquelon          | SPM | Euro                          | EUR |
| St. Vincent and The Grenadines   | VCT | E. Caribbean Dollar           | XCD |
| Sudan                            | SDN | Sudanese Pound                | SDD |
| Sudan Airlines                   | --  | Sudan Airline Rate            | SDA |
| Suriname                         | SUR | Surinam Guilder               | SRG |
| Svalbard and Jan Mayen Is.       | SJM | Norwegian Krone               | NOK |

|                             |     |                            |     |
|-----------------------------|-----|----------------------------|-----|
| Swaziland                   | SWZ | Lilangeni                  | SZL |
| Sweden                      | SWE | Swedish Krona              | SEK |
| Switzerland                 | CHE | Swiss Franc                | CHF |
| Syrian Arab Rep.            | SYR | Syrian Pound               | SYP |
| Taiwan                      | TWN | New Taiwan Dollar          | TWD |
| Tajikistan                  | TJK | Somoni                     | TJS |
| Tanzania United Republic of | TZA | Tanzanian Shilling         | TZS |
| Thailand                    | THA | Thailand Baht              | THB |
| Togo                        | TGO | CFA Franc BCEAO            | XOF |
| Tokelau                     | TKL | New Zealand Dollar         | NZD |
| Tonga                       | TON | Pa'anga                    | TOP |
| Trinidad and Tobago         | TTO | Trinidad and Tobago Dollar | TTD |
| Tunisia                     | TUN | Tunisian Dinar             | TND |
| Turkey                      | TUR | Turkish Lira               | TRL |
| Turkmenistan                | TKM | Manat                      | TMM |
| Turks and Caicos Is.        | TCA | U.S. Dollar                | USD |
| Tuvalu                      | TUV | Australian Dollar          | AUD |
| U.S. Minor Outlying Islands | UMI | U.S. Dollar                | USD |
| U.S. Virgin Is.             | VIR | U.S. Dollar                | USD |
| Uganda                      | UGA | Uganda Shilling            | UGX |
| Ukraine                     | UKR | Ukrainian Hryvnia          | UAH |
| United Arab Emirates        | ARE | U.A.E. Dirham              | AED |
| United Kingdom              | GBR | Pound Sterling             | GBP |
| United States               | USA | U.S. Dollar                | USD |
| Uruguay                     | URY | Peso Uruguayo              | UYU |
| Uzbekistan                  | UZB | Uzbekistan Sum             | UZS |
| Vanuatu                     | VUT | Vatu                       | VUV |
| Venezuela                   | VEN | Bolivar                    | VEB |
| Vietnam                     | VNM | Dong                       | VND |
| Wallis and Futuna Is.       | WLF | CFP Franc                  | XPF |
| Western Sahara              | ESH | Moroccan Dirham            | MAD |
| Yemen                       | YEM | Yemeni Rial                | YER |
| Yugoslavia                  | YUG | Yugoslavian New Dinar      | YUM |
| Zambia                      | ZMB | Zambian Kwacha             | ZMK |
| Zimbabwe                    | ZWE | Zimbabwe Dollar            | ZWD |