INTEGRATION GUIDE

This document is created for merchants and developers that want to integrate the My Enterprise solution with an application or website. This document will provide you with all information required for a successful integration.

My Enterprise
Version 4.1

Document Information

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INTRODUCTION

Document Overview

This document is intended for merchants and developers that want to integrate the My Enterprise solution with an application or website for the purpose of processing online credit card transactions. The document will provide you with all information required for a successful integration. This document assumes the reader has experience in web or application development.

Note: 3D Secure integration is mandatory for certain banks.

Integration Support

Merchants

If you are a merchant that has signed up with MyGate's My Enterprise solution, you will have access to MyGate's Integration Help Desk for telephonic and email support. Telephonic support is available 8am to 5pm GMT +2. Email support is 8am to 5pm GMT + 2 and connects directly to our help desk through our ticketing system.

Introduction to My Enterprise

My Enterprise allows the developer to remain in complete control over the entire payment process. The cardholder never leaves the merchants environment. My Enterprise is a high performance TCP/IP payment solution that resides on your server. You can build your own API and use a web service to access the MyGate server.

My Enterprise relies on web services for the processing of transactions. A web service is a software system designed to support interoperable machine-to-machine interaction over a network. It has an interface described in a machine-process able format (specifically WSDL). Other systems interact with the Web service in a manner prescribed by its description using SOAP messages, typically conveyed using HTTP with an XML serialization in conjunction with other web-related standards.

My Enterprise requires that SSL is active on your website. The details of the transactions are passed to the MyGate Payment Gateway from your website using web services. This is an efficient method of ensuring that any payment page is neatly under the control of an organisations website and an excellent way to micromanage even the smallest of details. When combined with SSL, a secure platform emerges which can be designed to work proficiently with any payment solution.

My Enterprise Features

- ✓ The merchant is required to install SSL
- ✓ Merchant hosts their own payment page
- ✓ The merchant controls each and every phase of the transaction
- ✓ The online payment integration is fully incorporated into an existing website
- ✓ Intermediate development skills are required
- ✓ Email confirmation can be sent to cardholder for successful purchases.
- ✓ The Fraud Module can be configured to help reduce fraud.

My Enterprise Payment Process

One of the main benefits of utilising the My Enterprise Solution is the control over the payment page and entire payment process. It requires a higher level of integration as the merchant may be required to form part of the 3D Secure transaction process if their merchant account is 3D enabled.

My Enterprise requires that the merchant host their own payment page. Once the transaction is received by MyGate, it is then processed to the acquiring bank for authorization. The authorization message is then returned to the merchant.

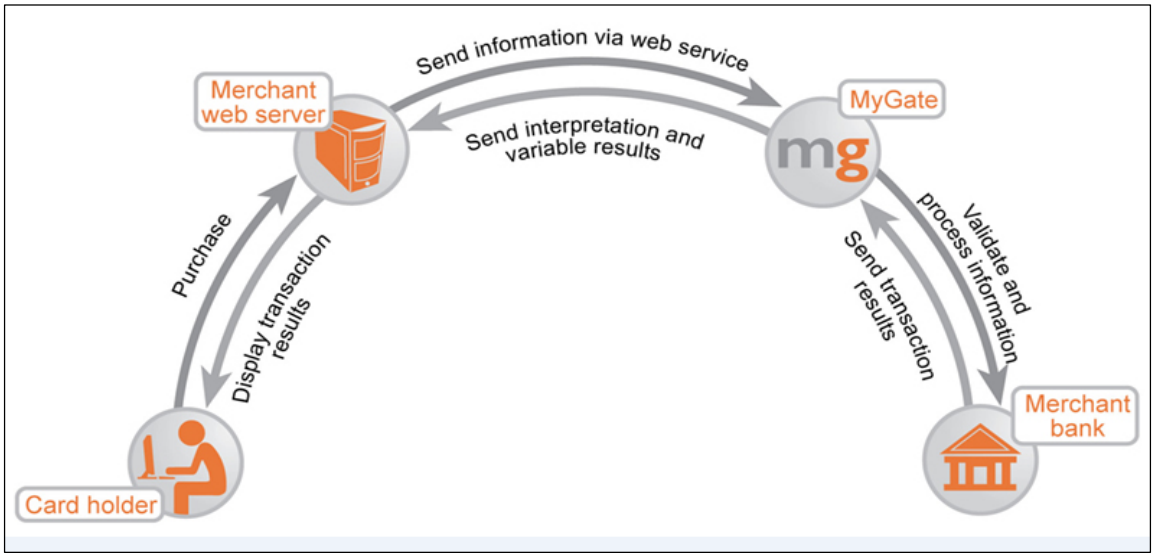


Illustration: My Enterprise Payment Process

Step 1 – Cardholder makes purchase from merchant's website.
Step 2 – Merchant displays payment page.
Step 2 – Merchant uses a web service to transmit data using SSL to MyGate
Step 3 – MyGate receives the transaction request and performs validation on the credit card detail and other Data elements submitted.
Step 3 – MyGate processes the transaction to merchant Bank.
Step 4 – The merchant bank processes the transaction and returns a successful or declined message to MyGate.
Step 5 – MyGate returns this result and/or error code with error description back to the Merchant Website address specified in the Web Service call.
Step 6 – If the notifications are enabled, (from the MyGate Web Console) MyGate will notify the merchant by email of the transaction details.
Note: The entire transaction process takes around 3 seconds.
Note: The above diagram and transaction process does not include the 3D Secure process.

General Requirements for Using My Enterprise

- **Website –** You must have a website or shopping cart and have ability to load sample code or shopping cart code to the site.
- **SSL –** You must host your own SSL
- **Internet Merchant Account –** You are required to have an internet merchant account with a bank.
- **Internet Connectivity –** Internet connectivity is required to transmit the transaction.
- **Static IP –** The IP address that the web service call is coming from must be static.
- **MyGate** issued **Merchant ID and Application ID –** Required data elements when sending your web service call.

Internet Merchant Account

An Internet Merchant Account is required to accept credit card transactions over the internet. If you have an Internet Merchant Account you need to supply these details to MyGate before going Live. If you do not have an Internet Merchant Account, MyGate can assist you with your application to the acquirer (bank).

Note: An Internet Merchant Account is a different type of merchant account than what is used for card present / POS transactions. You will need to apply for an Internet Merchant Account even if you already accept credit card transactions from your store.

Security – Server Passwords

You need to apply security best business practice to ensure that confidential data and card detail are protected while either being stored in the database or while data is being transmitted. It is suggested that you encrypt key information issued to you by MyGate such as merchant ID, application ID and transaction index.

Note: To reduce fraud or potential incidents it is recommended to encrypt any password that gives access to your server.

SSL

SSL (Secure Socket Layer) is a security protocol that ensures that data being captured on your website cannot be read by encrypting the data using two encryption keys.

The My Enterprise Solution requires a SSL Certificate to be installed on your web server before live transactions can be processed. Without this certificate, MyGate will automatically fail any live transactions that are being submitted.

Note: A SSL Certificate can be obtained from your website hosting company or developer.

Card Storage

Storing of credit card detail is not recommended. MyGate offers numerous payment solutions that enable merchants to maintain control over payment processing without storing card.
Note: Refer to MyGate's Tokenization Solutions.
Note: Refer to PCI Standards for rules behind storing of card detail.

Payment Page Handling Best Practice

This section highlights best business practices when it comes to handling credit card information on your "**Payment Page**". These practices will aid in reducing cardholder finger error and also provide ability for some validation before processing to MyGate.

Card Number Field

- Only allow "**numeric"** in the card number field. If alpha is in field, transaction will fail.
- Perform Luhn Check - The Luhn algorithm or Luhn formula, also known as the "modulus 10" or "mod 10" algorithm, is a simple checksum formula used to validate a variety of identification numbers, such as credit card numbers. The algorithm is in the public domain and is in wide use today.

Card Expiry

- Only display "**current"** and "**future**" dates.

Card Type

- Only display card types (MasterCard, Visa etc.) that you have been loaded by MyGate to accept. In the event that you process a card type that is not loaded, you will receive an error back.
- **Note:** By default you are only loaded with MasterCard and Visa. Other card types may require application to relevant card association.

Failure / Success Page

When a transaction is completed the cardholder should be directed to a page that shows if the transaction was successful or declined. This is called the failure / success page. This allows the cardholder to identify whether the transaction was successful or not. The logic relating to which page to display is determined by the merchant based on the Transaction Result returned by MyGate. In the event that the transaction result is declined, you can also display a message description informing the cardholder why the transaction was declined.

TRANSACTION PROCESSING

Payment Instruments

In this section the various payment instruments supported are listed. These are updated regularly as new payment instruments are integrated to the MyGate platform.

Supported Payment Types

- Credit Cards
- Pinless Debit Cards

Supported Credit Cards

- Visa
- MasterCard
- Amex
- Diners

Supported Currencies

- BWP - Botswana Pula
- GHS -Ghanaian Cedi
- KES Kenyan Shilling
- USD - US Dollar
- SCR - Seychellois Rupee
- TZS - Tanzanian Shilling
- UGX - Ugandan Shilling
- ZMW - Zambian Kwacha
- MZN – Mozambican Metcal
- NGN - Nigerian Naira
- GBP - British Pound
- EUR - Euro
- MUR - Mauritian Rupee
- ZAR – South African Rand

Supported Transaction Types

The below lists the different credit card transaction types that MyGate supports:

- Authorize
- Sale
- Authorization Reversal
- Capture (Settle)
- Credits / Refunds
- 3DS Lookup
- 3DS Authenticate

MyGate Web Console

The MyGate Web Console is used by merchants to manage payment gateway transactions. The console is full of rich features enabling transactional management of any MyGate's solution or integration methods. A merchant will be issued with a user name and password for the web console when they sign up with MyGate.

From within the MyGate Web Console you can:

- Manage Configuration & Settings
- Manage Transactions
    - Authorize
    - Capture Transactions
    - Credits / Refunds
    - Authorization Reversals
- Reporting

Credit Card Processing Methods

The credit card transaction process is defined mainly by an authorization and a capture. An authorize request is processed to the acquirer who in turn on processes to the issuer. If the transaction is approved / successful the issuer will reserve the funds on the credit card for 21 working days. This is called an authorization. In order for you to receive your funds (settlement), a capture request is required.

To Capture an Authorized transaction, you can either:

- Send a capture request using the Capture Message Type in the web service request.
- Log into the MyGate Web Console to manually capture the transaction.

Association Processing Rules

MasterCard and Visa require that the settlement of a credit card transaction takes place at time of delivery of the purchased product or service. If you are providing a product or service with real time delivery then deferred settlement is not required and a "Sale" action type can be used.

Real Time – Processing (Sale)

If you are delivering a product or service in real time, then you can use the **Sale** action type processing call which means you can perform one web service call that will include the authorize and capture request in the same API call.

A Sale action type eliminates the need for two web service calls (Authorize and Capture) to MyGate. A Sale action type only requires one web service call to MyGate.

The process is as follows:

1. Your website captures the credit card details from the cardholder.
2. You perform a Sale action type call to MyGate via a web service.
3. MyGate processes an authorization to the bank.
4. If the authorization is successful, MyGate processes a capture message and the transaction is flagged to be settled to the bank in the next batch period.

Deferred Settlement – Processing (Authorize Call)

If you are delivering a product or service in arrears, then you can use the **"Deferred Settlement"** process which means you will first send an authorize request to reserve the funds of the credit card. When you have delivered the goods or service you can send a capture request or capture in the MyGate Web Console. Upon capture, MyGate will submit the transaction for settlement to the bank.

Note: Go to http://mygate.co.za/payment-solutions/payment-gateway/online-payments/ to find out more about deferred settlement.

Transaction Type Processing

It is important to note that certain transaction types can be processed either by the "**web service"** or through the "**MyGate Web Console**".

From the MyGate Web Console merchants can process:

- Credits / Refunds
- Captures
- Manual Authorizations for MOTO environment

Note: The MyGate Web Console caters for a high level of security, user permissions and processing limits for Credits / Refunds and Captures. Based the merchants requirements, integration to certain transaction types may not be necessary as they can be managed through the MyGate Web Console.

Note: It is recommended that you use the MyGate Web Console for these specific transaction types to reduce risk and potential error.

Transaction Result

The transaction result is the transaction response returned from the request web service when sending any message type request to MyGate. The transaction result informs you whether the transaction was successful or declined. The transaction result is often used to display to the cardholder on the failure / success page. MyGate provides declined reason codes, error messages and in-depth message descriptions that can be displayed to merchant on the failure / success page.

Transaction Result Types

- **Successful:** Successful means that the transaction was successfully processed by the acquirer / bank.
- **Successful with Warning:** Successful with warning means that the transaction has successfully been processed by the acquirer. The warning has been triggered by the transaction being flagged by the fraud module. This will only occur in the event that the merchant has configured the fraud module to "**flag**" a transaction. This particular transaction result is used to "**warn**" the merchant of a potential fraudulent transaction.
- **Bank Declined:** Bank declined transactions are transactions declined by the bank. Generally, the bank that declines the transaction is the issuing bank and NOT the acquiring bank. There can be numerous reasons why the bank declines a transaction with most common ones being insufficient funds and invalid card detail.
- **MyGate Declines**: MyGate Declined transactions are transactions declined at MyGate before sending to bank. The main declined reasons are fraud module rules, incorrect integration and invalid data being populated in the web service.

3D Secure

MyGate offers the 3D Secure service to all of its merchants. If you are using My Enterprise, you may be required to integrate to MyGate's 3D Secure API which is included in this document.

MyGate's payment platform is integrated to 3D Secure enabling transactions to be processed to both the MasterCard Secure Code & Verified by Visa 3D Secure schemes.

3D Secure stands for Three Domain Secure - the payment industry's internet authentication standard which has been developed by the major card schemes. Visa has called their version of the scheme 'Verified by Visa' and MasterCard have called their equivalent initiative 'MasterCard Secure Code'. These are both collectively referred to as 3D Secure.

Note: In order for a merchant to share the benefits of 3D Secure, they must request that their internet merchant account be 3D Secure enabled.
Note: 3D Secure is mandatory with certain banks.

3D Secure Transactional Process

The 3D Secure process consists of a web service call followed by a form post. Each call can bring back variable results that will form part of the next process.

High Level 3D Secure Transaction Process:

Step 1 - Shopper browses at merchant site, adds items to shopping cart, then finalizes purchase.
Step 2 - The merchant will invoke a web service (3DS Lookup) to the MyGate's API.
Step 3 - MyGate sends query including card number to Directory Server. This leg of the process is also commonly known as VERes.
Step 4 - If card number is in a participating card range, Directory Server queries appropriate Access Control Server (ACS) to determine whether card number is enrolled.
Step 5 - ACS responds to Directory Server, indicating whether authentication is available for the card number.
Step 6 - Directory Server forwards ACS response (or its own) to MyGate.
Step 7 - MyGate's will return a 3DS Lookup Response to the merchant. If cardholder is not enrolled in 3D Secure or if authentication is otherwise unavailable, the merchant submits a traditional authorization request and the 3D process ends.
Step 8 - Based on the result (issuer or card type participating), merchant initiates a form post (3DS Authenticate) that posts the values retrieved from the 3DS Lookup Response (first web service call) to the Access Control Server (ACS) via the shopper's browser.
Step 9 - ACS authenticates shopper as appropriate for the card number then formats the ACS Result message with appropriate values and digitally signs it.
Step 10a - ACS returns an ACS result (PARes) to merchant via shopper's browser.
Step 10b - ACS sends a copy of the Payer Authentication Response to the Authentication History Server.
Step 11 – Merchant process the result with authorization request to MyGate.

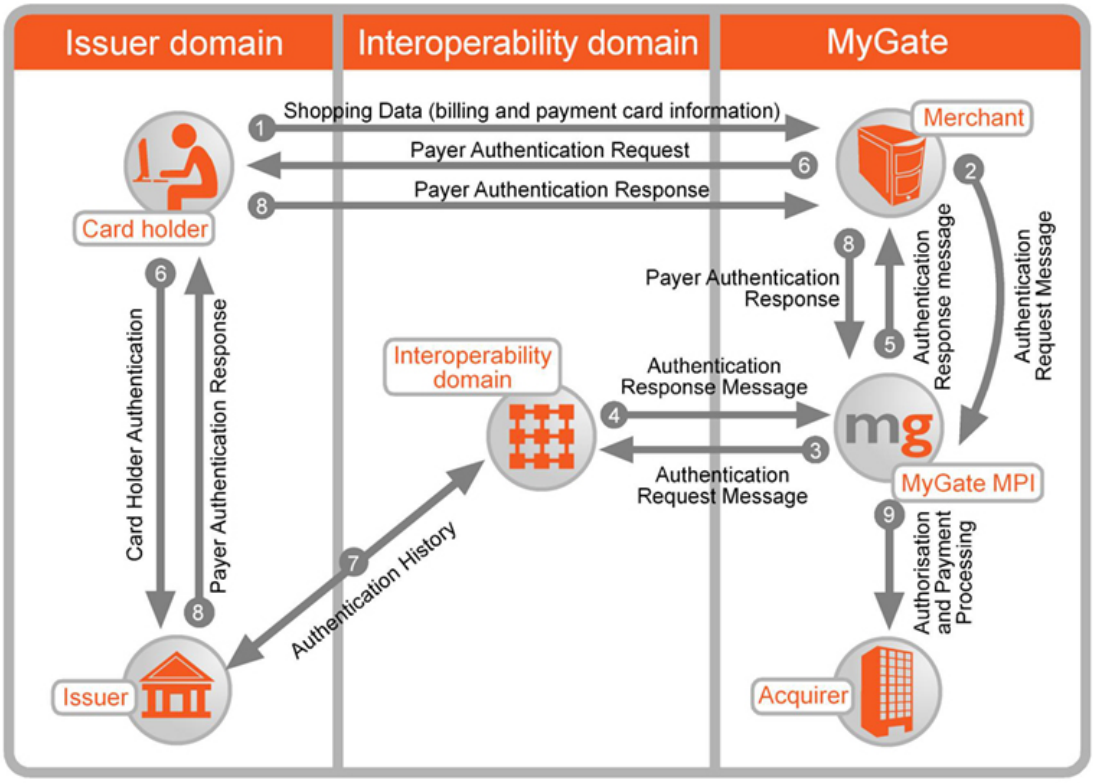


Illustration: 3D Secure Process

Sample ACS Form POST

```
<form name="frmLaunchACS" method="POST" action="<?PHP echo $acsUrlValue; ?>">
   <textarea cols="50" rows="5" style="width:400" name="PaReq" >
   <?PHP echo $Payload; </textarea>  <input type="text" style="width:400" name="TermUrl"
   <!---This is the merchant URL that the form POST returns to --->
            value="http://www.merchant.com/3DSecure_Enterprise_Complete.php?Step=2"/>
   <input type="text" style="width:400" name="MD" value="<?PHP echo $TransactionIndex; ?>"/>
   <input type="submit" value="Submit Form" style="width:250" >
</form>
```

This Form POST will return TransactionIndex and paresPayload values once the cardholder has correctly entered their OTP. These values will be entered into the Authorise or Sale actions (Actions 1 or 5).

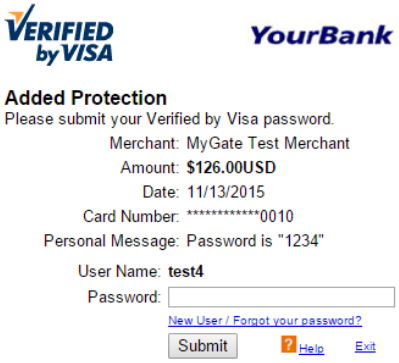


Illustration: OTP Page

Understanding Electronic Commerce Indicators (ECI)

The ECI indicates the security level associated with an Internet purchase transaction. The 3DS Lookup & 3DS Authenticate requests will return an ECI in the response message which the merchant can use to gauge risk associated with the transaction. The payment gateway will process the ECI to the acquirer or its processor for inclusion in the authorization request message.

Note: Some ECI indicators will allow liability shift for certain transactions relating to chargebacks.
Note: Merchants can request that MyGate block specific ECI's that do not allow for liability shift.

Dispute evidence

Merchants are recommended to store the below data as evidence in the event of a chargeback dispute relating to 3D Secure processing. The below data is returned on the 3DS Lookup & Authenticate responses.

Dispute Situation	ECI	Evidence
Proof of Authentication or Authentication Attempt	5,6,1 or 2	**Minimum, if available:**
		• Purchase Date and Time
		• XID
		• Purchase Amount
		• Order Description
		• Transaction Status
		• ECI
		• Signature Date & Time
		• CAVV / AAV

3D Secure Calls

The merchant will be required to initiate three 3D Secure calls as defined below:

3DS Lookup: This message is used to verify if the issuer and cardholder participates in 3D Secure program.

3DS Authenticate: This message is used direct the card holder to their banks authentication page where they will validate the transaction using their secret password.

Time Outs

3DS Lookup
The standard timeout value for the 3DS Lookup to complete is ten seconds.

3DS Authenticate
The 3DS Authenticate Request message has no timeout value as it relies on the merchant's eCommerce application to determine maximum time frames for various shopping session activities.

CONFIGURATION

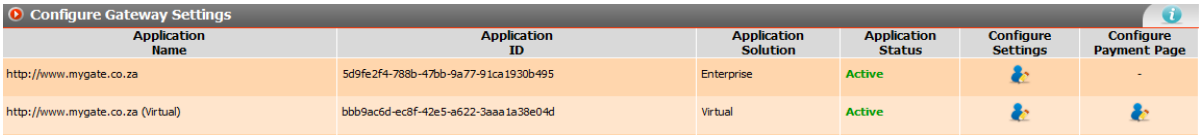
Configuring My Enterprise

Configuration is controlled from within the MyGate Web Console. Certain configuration is **"mandatory"** in order to begin trading live. Configuration for the payment gateway can be found under settings within the MyGate Web Console. (refer to Settings – Gateway below)

NOTE: The **Referral IP** must be configured in the MyGate Web Console in order for web service to be accepted. This is only required in Live mode.

Settings - Gateway

Gateway settings are used to configure the MyGate payment solutions.


Configure Gateway Settings

Application Name	Application ID	Application Solution	Application Status	Configure Settings	Configure Payment Page
http://www.mygate.co.za	5d9fe2f4-788b-47bb-9a77-91ca1930b495	Enterprise	Active		-
http://www.mygate.co.za (Virtual)	bbb9ac6d-ec8f-42e5-a622-3aaa1a38e04d	Virtual	Active		

Illustration: Settings - Gateway

Configure Settings – Enterprise Solution

Within this section you can configure the IP Address that you will be calling from.

Configure Settings - Referral IP (mandatory)

The Referral IP address is the IP address that your application is being sent from. The IP address must be a static IP address. The IP address must be added in the configuration menu in order for your web service call to be accepted by MyGate.

How to Add Referral IP

1. Go to "**Products**" tab and click "**Payment Gateway**".
2. In the left hand column click "**Settings**".
3. In the left hand column click "**gateway**".
4. Click the "**configure settings**" icon on the application that you want to configure.
5. Enter the IP address in the text box next to the add IP address label.
6. Click on the '**add**' button.
7. Click on the "**save**" button at the bottom of the screen.

INTEGRATION

Preparation for Integration to My Enterprise

You can follow the below steps to prepare for integration to your website, shopping cart or application to the My Enterprise solution:

1. For Test Account information, click here.
2. If you do not have a Live Account, please email our sales team.
3. Configure referral IP within the MyGate Web Console.
4. Decide whether you are going use Real Time or Deferred Settlement Processing Methods.
   Note: Association rules state that if selling physical goods a merchant should use deferred settlement.
5. Decide whether you are going to use 3D Secure to help reduce fraudulent credit card transactions.
   Note: If you are going to integrate to 3D Secure refer to the 3D Secure Integration Guide. This is a separate integration to My Enterprise.
   Note: 3D Secure is a mandatory requirement for certain banks.
6. Decide whether you are going to store credit card detail in your database or use the MyGate Web Console or one of MyGate's tokenization solutions to manage your transactions.
   Note: MyGate does NOT recommend card storage. Please refer to PCI Standards for association rules related to card storage.
7. Integrate your website or shopping cart using your code, MyGate sample code or MyGate shopping cart code. Ensure that you are using the correct Merchant ID and Application ID issued to you on registration. Ensure that if you are testing using a Live Account that you are using **Test Mode (0)** when integrating for the first time.
8. Test My Enterprise before you move to **Live Mode (1)** and go live with your site.

Registering for a Live Account

In order to register for a live account, you will need an internet merchant account and sign up for MyGate's payment gateway services.

Test Account Details

Note: For testing purposes please use the following MerchantUID and ApplicationUID's:

MerchantUID: F5785ECF-1EAE-40A0-9D37-93E2E8A4BAB3
3D Secure ApplicationUID: 5A02E47D-7E2E-452B-A940-E3E946265037
Non 3D Secure ApplicationUID: A06033E6-43CF-471A-A985-E16442ED1FFF

When going live, these will need to be replaced in your code by using the MyGate issued MerchantUID and ApplicationUID.

Note: If your merchant account is 3DS enabled, please ensure that you have integrated into the 3DS Lookup and Authenticate methods (Actions 14 and 15).

Web Service URL

The Web Service URL is the MyGate URL used to submit the web service to:

https:// api.mygateglobal.com

Note: Mode 0 (test) and Mode 1 (live) can be used.
Note: Mode 1 must be used when going live.

Sample Code

For integration purposes, MyGate provide sample code which can assist in your integration into the MyGate API.

Note: For a complete list of sample code please visit: https://github.com/MyGateGlobal/SampleCode
Note: For a full list of XML Samples, XML Schema and WSDL, please visit: https://github.com/MyGateGlobal/SampleCode/tree/master/XML%20Actions

Testing

For testing purposes, MyGate provides a number of tools which can aid you identifying potential errors and to assist developers in integrating into MyGate's API.

- Click here to access a list of test cards.
- Click here to access a list of Response Codes.
- Click here to access the Go Live Check List.

Test Cards Provided:

- Visa
- MasterCard
- Amex
- Diners
- Maestro

Note: Test cards can only be used when transacting in test mode **(mode 0)**. If you use a test card in live mode an error code will be returned.

SPECIFICATION FORMAT

Data Representation Notations

Data representation notations indicate how data is represented. All message data elements are aligned on byte boundaries. The following data types are encoded using EBCDIC, except for binary data. The length of the field is notated in brackets after the Data Type is declared. For example, String (255), where the 255 is the max characters allowed in that Data Element.

Notation	Description
GUID	a Globally Unique Identifier is a unique reference number used and are displayed as a 32 characters.
String	alphabetic and numeric characters (including spaces and special characters)
Integer	numeric characters (excluding spaces and special characters)
Decimal	numeric characters that have a fractional part separated from the integer with a decimal (.) separator
Bit	single numeric character with a value of 1 or 0

Date and Time Notations

Date and time notations indicate the format of the data that represents date and time.

Notation	Description
MM	month (two digits; 01–12)
DD	day (two digits; 01–31)
YYYY	year (calendar year; 1999–9999)
hh	hour (two digits; 00–23)
mm	minute (two digits; 00–59)
ss	second (two digits; 00–59)

Presence Notations

Presence notations indicate if and how data is present.

Notation	Description
M	Mandatory. The data element is required in the message.
C	Conditional. The data element is required in the message if the conditions described in the accompanying text apply.
O	Optional. The data element is not required, but may be included in the message at the message initiator's option.

MESSAGE OVERVIEW AND DEFINITIONS

Message Overview

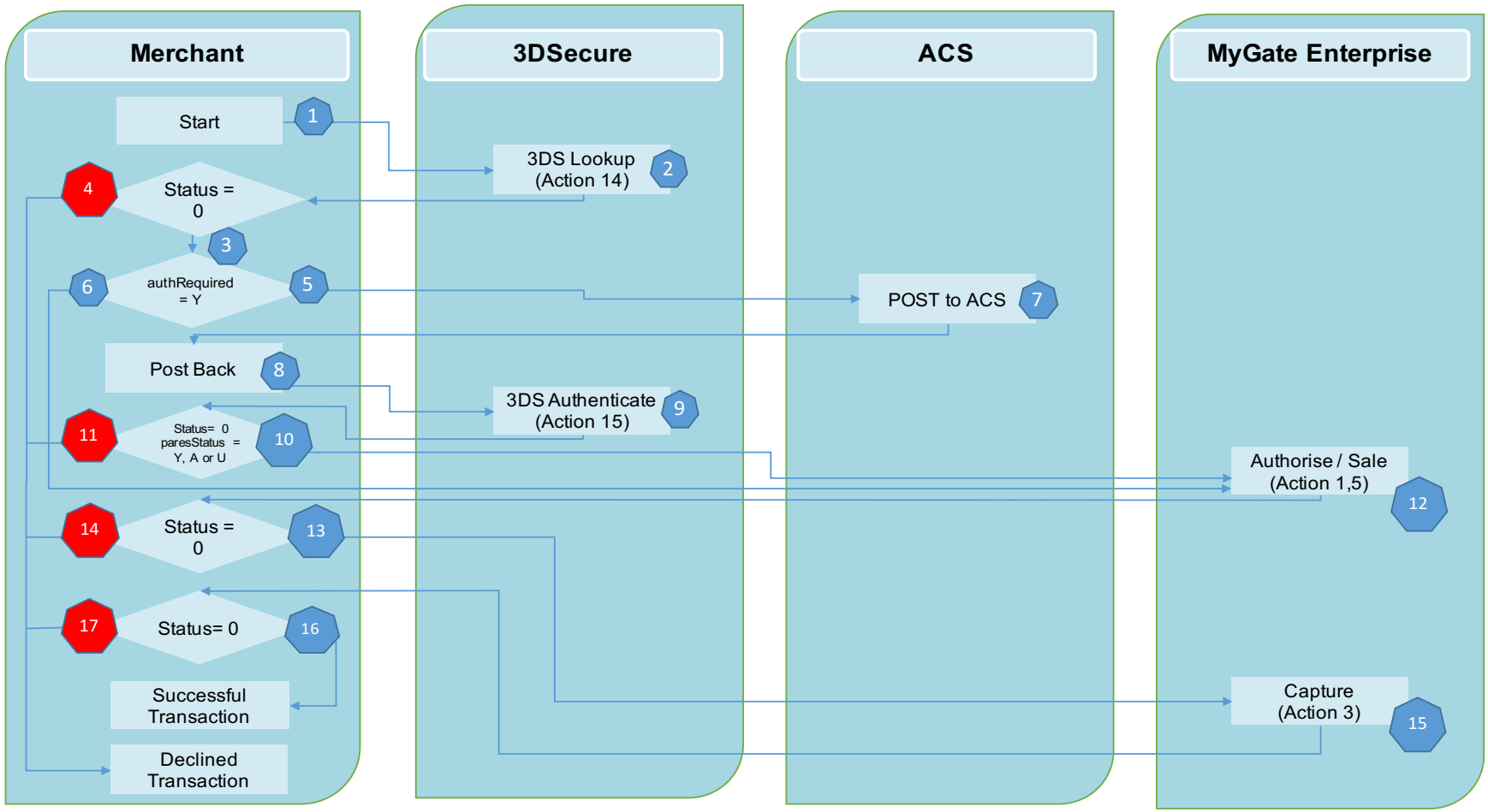


Illustration: Transaction Overview

1. The card holder clicks a “Pay-Now” button on the merchant website after having filled in their credit card information. The merchant website or application does a web service call to the MyGate 3D-Secure API, calling the 3DS Lookup (Action 14).
2. The 3DS Lookup response will include a status field.
3. In the event that the status field value is equal to “0” or “1”, you will continue to step 5 below.
4. In the event that the status field value is equal to “-1”, the transaction was unsuccessful. You should display an appropriate message to the card holder at this time.
5. In the event that the authRequired field = “Y” in the 3DS Lookup Response (Action 14), you will need to redirect your card holder to an URL (returned in step 2 as the acsUrl field) by means of a form POST. It is at this stage that the card holder will be prompted for their 3D-Secure OTP (One Time PIN). A sample form POST is available here.
6. In the event that the authRequired field = “N”, you can attempt an authorization by invoking the MyGate Enterprise API calling the Authorise (Action 1) or a Sale (Action 5). Note that this field needs to be read in conjunction with the liabilityShift field to determine the risk of this transaction.
7. After the card holder has entered their 3D-Secure OTP, they will be posted back to your website or application.
8. You can call the 3DS Authenticate (Action 15) to receive the payload or proceed directly to attempt an Authorise or Sale (Actions 1 or 5). Please note that you will then populate the paresPayload field with the values received from the ACS response.
9. If you called a 3DS Authenticate (Action 15), MyGate will return a response back to your website or application.
10. In the event that the status field value from the 3DS Authenticate response is equal to “0” or “1”, and the paresStatus is equal to “Y”, “A” or “U”, you will call the MyGate Enterprise API, using Authorise (Action 1) or Sale (Action 5). The paresStatus field value needs to be read in conjunction with the liabilityShift field to determine the risk of this transaction.
11. In the event that the status field value from the 3DS Authenticate response (Action 15) is equal to “-1” or the paresStatus value is equal to “N”, the transaction was unsuccessful. You should display an appropriate message to the card holder at this time.
12. MyGate will attempt to perform an authorisation on the submitted card details and return a transaction response.
13. If an Authorise (Action 1) was processed and the status field value returned in step 12 is equal to “0” or “1”, you may attempt to perform a Capture (Action 3) on the authorised transaction. If this step is not performed, the transaction will not be settled and the money authorised on the card holders account will not be paid over to you. If a Sale (Action 5) was performed and the status field value returned is equal to “0” or “1”, the transaction was successful and the will be paid over to you.
14. In the event that the result returned in step 12 is equal to “-1”, you can deduce that the transaction was unsuccessful. You should display an appropriate message to the card holder at this time.
15. MyGate will attempt to settle the requested transaction and will return a response to your website or application.
16. In the event that the status field value from step 15 is equal to “0” or “1”, the transaction was successful. You may display an appropriate message to the card holder in this case.
17. In the event that the status field value from step 15 is equal to “-1”, the transaction was unsuccessful. You should display an appropriate message to the card holder at this time. Read through the response data to determine the reason for the failure and to rectify before re-submitting a Capture, as the funds has been reserved on the customer’s card.

Message Definitions

Message definitions describe the general purpose, type, routing, and response information of each of the MyGate API message type. Each MyGate API message has 2 portions;

- Header
- Body

Request Message (Header)

The below table represents the header portion of the Message that the API supports.

XML	Data Type & Length	Presence	Comments	Example Data
<Header>				
<authenticate>				
<merchantUID>F5785ECF-1EAE-40A0-9D37-93E2E8A4BAB3</merchantUID>	GUID	M	Each merchant is issued MerchantUID by MyGate. This identifies who the merchant is on MyGate's Back Office System.	F5785ECF-1EAE-40A0-9D37-93E2E8A4BAB3
<merchantToken>5A02E47D-7E2E-452B-A940-E3E946265037</merchantToken>	GUID	M	A merchant token is linked to your website or application. Your default token is the ApplicationUID issued to you by MyGate.	5A02E47D-7E2E-452B-A940-E3E946265037
<actionTypeID>1</actionTypeID>	Integer (2)	M	This is used to identify what action should be performed.	1
<authenticate>				
</Header>				

List of Message Types (Actions)

The below table represents the message body message types that the API supports and indicates the entity that originates the message type.

Message Type	Action Type	Merchant	MyGate	Comments
Authorise Request	1	X		The Authorise message creates a request to hold the requested amount and mark it as unavailable from the customer's card until it is either Captured or the hold terminates, thus rendering the amount available again.
Authorise Response			X	
Authorise – Reversal Request	2	X		The Authorise – Reversal Message releases the hold that the Authorize placed on the customer's credit card funds. Use this service to reverse an unnecessary or undesired Authorisation. You can use full Authorise – Reversal only for an authorisation that has not been captured.
Authorise - Reversal Response			X	
Capture Request	3	X		When you are ready to fulfil a customer's order, Capture the Authorisation for that order.
Capture Response			X	
Sale Request	5	X		A sale is a bundled authorization and capture. You can use a Sale instead of a separate Authorise and Capture if there is no delay between taking a customer's order and shipping the goods.
Sale Response			X	
Credit Capture Request	4	X		A Follow-On Credit is linked to a Capture in the system. You can request multiple Follow-On Credits against a single Capture. This action would reverse a Capture – Action 3.
Credit Capture Response			X	
Credit Sale Request	12	X		Credit Request messages are generated when a merchant wants to return the funds after a transaction that has been captured (refund of a Sale - action 5).
Credit Sale Response			X	
3DS Lookup Request	14	X		This message is used to verify if the issuer and cardholder participates in 3D Secure program.
3DS Lookup Response			X	
3DS Authenticate Request	15	X		This message is used direct the card holder to their banks authentication page where they will validate the transaction using their secret password.
3DS Authenticate Response			X	
Reports Request	19	X		The Report request exposes console and internal database reporting via an API call and returns the data in an xml format.
Reports Response			X	

MESSAGE TYPE LAYOUTS

Request Message (Body)

This section describes the mandatory, conditional, optional data element layouts for all message types (Actions) that the API supports.

3DSecure Lookup (Action 14)

XML	Data Type & Length	Presence	Comments	Example Data
<xmlField>				
<mode>0</mode>	bit	M	This is used to identify what mode the merchant is using. The two modes are test and live.	0 = Test 1 = Live
<applicationUID>00000000-0000-0000-0000-000000000000</applicationUID>	GUID	M	An ApplicationUID is linked to your website or application. A merchant can have multiple ApplicationUID's. The ApplicationUID is linked to the MerchantUID and is issued by MyGate.	5A02E47D-7E2E-452B-A940-E3E946265037
<merchantReference>merchantReference</merchantReference>	String (255)	O	This is a unique reference that a merchant can generate to track and identify a transaction.	UniqueRef123_14
<terminal>terminal1</terminal>	String (255)	O	This is used to identify the origination point of the transaction.	website, moto, mobile
<cardDetails>		M		
<cardHolder>Test Holder</cardHolder>	String (255)	M	This is the name of the card holder printed on the front of the card.	John Doe
<cardNumber>4111111111111111</cardNumber>	Integer (16)	M	This is the 13 to 16 digit number on the front of the card	4111111111111111
<expiryMonth>01</expiryMonth>	Integer (2)	M	This is the month that the card expires which is listed on the front of the card.	05
<expiryYear>2020</expiryYear>	Integer (4)	M	This is the year that the card expires which is listed on the front of the card.	2020
</cardDetails>				
<amount>1.01</amount>	Decimal (6.2)	O	This data element must contain a valid numeric data and have two decimal places.	1024.56
<billingDetails>		O		
<customerID>customerID</customerID>	String (255)	O	The merchant can create a client/customer ID in this data element to identify the card holder or customer in the merchant's system.	Cust1234
<invoiceID>invoiceID</invoiceID>	String (255)	O	The merchant can create an invoice ID in this data element to identify invoice in their system.	Inv-123
<invoiceDescription>Invoice for testing</invoiceDescription>	String (255)	O	This is the description of the invoice in the merchant's system.	Sales Invoice
<contact>		O		
<firstName>firstName</firstName>	String (255)	O	The merchant can create a first name in this data element. This element must be present if any of the contact elements has been populated	John
<lastName>lastName</lastName>	String (255)	O	The merchant can create a last name in this data element. This element must be present if any of the contact elements has been populated	Doe
<company>company</company>	String (255)	O	The merchant can create a company name in this data element. This element must be present if any of the billingDetails.contact elements has been populated.	Private
<contactNumber>contactNumber</contactNumber>	String (255)	O	The merchant can create a contact number in this data element. This element must be present if any of the billingDetails.contact elements has been populated.	+27 21 555 1234
<email>test@email.com</email>	String (255)	O	The merchant can create an email address in this data element. This element must be present if any of the billingDetails.contact elements has been populated.	contact@yourdomain.com
</contact>				
<address>		O		
<address1>address1</address1>	String (255)	O	The merchant can create an address in this data element. This element must be present if any of the billingDetails.address elements has been populated.	1 Infinite Loop
<address2>address2</address2>	String (255)	O	The merchant can create an address in this data element. This element must be present if any of the billingDetails.address elements has been populated.	Main Building
<address3>address3</address3>	String (255)	O	The merchant can create an address in this data element. This element must be present if any of the billingDetails.address elements has been populated.	Cupertino
<suburb>suburb</suburb>	String (255)	O	The merchant can create a suburb in this data element. This element must be present if any of the billingDetails.address elements has been populated.	Palo Alto
<city>city</city>	String (255)	O	The merchant can create a city in this data element. This element must be present if any of the billingDetails.address elements has been populated.	California
<postalCode>12345</postalCode>	String (255)	O	The merchant can create a postal code in this data element. This element must be present if any of the billingDetails.address elements has been populated.	95014
<country>ZA</country>	String (2)	O	The merchant can create a country in this data element. This element must be present if any of the billingDetails.address elements has been populated.	US
</address>				
</billingDetails>				
<browserDetails>				
<userAgent>Test</userAgent>	String (255)	M	The is the userAgent information of the cardholders' browser. If processing from a merchants' application, use the merchant server userAgent details.	Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 5.1; GTB6; InfoPath.1; .NET CLR 2.0.50727; .NET CLR 3.0.04506.30; .NET CLR 3.0.04506.648; .NET CLR 3.0.4506.2152; .NET CLR 3.5.30729)
<browserHeader>Test</browserHeader>	String (255)	M	The is the browserHeader information of the cardholders' browser. If processing from a merchants' application, use the merchant server browserHeader details.	image/pjpeg, application/vnd.ms-excel, application/vnd.ms-powerpoint, application/msword, application/xaml+xml, application/vnd.ms-xpsdocument, application/x-ms-xbap, application/x-ms-application,
<ipAddressv4>000.000.000.000</ipAddressv4>	Integer (3.3.3.3)	M	This is the IP address of the cardholders' browser. If processing from a merchants' application use the merchant server ip address.	216.58.210.78
<ipAddressv6>00:00:00:00:00:00:00:00</ipAddressv6>	String (255)	M		FF:EE:DD:CC:BB:AA:10:00
</browserDetails>				
</xmlField>				

3DSecure Authenticate (Action 15)

XML	Length	Presence	Comments	Example Data
<xmlField>				
<applicationUID>00000000-0000-0000-0000-000000000000</applicationUID>	GUID	M	multiple ApplicationUID's. The ApplicationUID is linked to the MerchantUID and is issued by MyGate.	5A02E47D-7E2E-452B-A940-E3E946265037
<transactionAuth>				
<transactionIndex>00000000-0000-0000-0000-000000000000</transactionIndex>	GUID	M	The transaction index is a unique identifier created by MyGate for each transaction for tracking and reconciliation purposes. The transaction index is required if merchant account is 3D Secure enabled or for a follow-on action.	79958A8D-0C7B-4038-8E2E-8948E1D678E1
<paresPayload></paresPayload>	String (255)	M	The encoded payment data generated by MAPS. Available if Enrolled = Y.	
</transactionAuth>				
<merchantReference>merchantReference</merchantReference>	String (255)	C	transaction.	UniqueRef123_14
<terminal>terminal1</terminal>	String (255)	O	This is used to identify the origination point of the transaction.	website, moto, mobile
</xmlField>				

Authorise/Sale (Action 1,5)

XML	Data Type & Length	Presence	Comments	Example Data
<xmlField>				
<mode>0</mode>	bit	M	This is used to identify what mode the merchant is using. The two modes are test and live.	0 = Test 1 = Live
<applicationUID>00000000-0000-0000-0000-000000000000</applicationUID>	GUID	M	An ApplicationUID is linked to your website or application. A merchant can have multiple ApplicationUID's. The ApplicationUID is linked to the MerchantUID and is issued by MyGate.	5A02E47D-7E2E-452B-A940-E3E946265037
<merchantReference>merchantReference</merchantReference>	String (255)	C	This is a unique reference that a merchant can generate to track and identify a transaction.	UniqueRef123_14
<transactionAuth>				
<transactionIndex>00000000-0000-0000-0000-000000000000</transactionIndex>	GUID	C	The transaction index is a unique identifier created by MyGate for each transaction for tracking and reconciliation purposes. The transaction index is required if merchant account is 3D Secure enabled or for a follow-on action.	79958A8D-0C7B-4038-8E2E-8948E1D678E1
<paresPayload></paresPayload>	String (255)	C	The encoded payment data generated by MAPS. Available if Enrolled = Y. This is returned from the ACS POST payload. This is populated if the merchant wants to perform a 3DS Lookup and Authorise or Sale in 1 step.	
</transactionAuth>				
<terminal>terminal1</terminal>	String (255)	O	This is used to identify the origination point of the transaction.	website, moto, mobile
<cardDetails>		M		
<cardHolder>Test Holder</cardHolder>	String (255)	M	This is the name of the card holder printed on the front of the card.	John Doe
<cardNumber>4111111111111111</cardNumber>	Integer (16)	M	This is the 13 to 16 digit number on the front of the card	5111111111111111
<expiryMonth>01</expiryMonth>	Integer (2)	M	This is the month that the card expires which is listed on the front of the card.	05
<expiryYear>2020</expiryYear>	Integer (4)	M	This is the year that the card expires which is listed on the front of the card.	2020
<cvvNumber>123</cvvNumber>	Integer (3)	M	This is the three digit number at the back of the card.	123
</cardDetails>				
<amount>1.01</amount>	Decimal (6.2)	M	This data element must contain a valid numeric data and have two decimal places.	1024.56
<billingDetails>		O		
<customerID>customerID</customerID>	String (255)	O	The merchant can create a client/customer ID in this data element to identify the card holder or customer in the merchant's system.	Cust1234
<invoiceID>invoiceID</invoiceID>	String (255)	O	The merchant can create an invoice ID in this data element to identify invoice in their system.	Inv-123
<invoiceDescription>Invoice for testing</invoiceDescription>	String (255)	O	This is the description of the invoice in the merchant's system.	Sales Invoice
<contact>		O		
<firstName>firstName</firstName>	String (255)	O	The merchant can create a first name in this data element. This element must be present if any of the contact elements has been populated	John
<lastName>lastName</lastName>	String (255)	O	The merchant can create a last name in this data element. This element must be present if any of the contact elements has been populated	Doe
<company>company</company>	String (255)	O	The merchant can create a company name in this data element. This element must be present if any of the billingDetails.contact elements has been populated.	Company XYZ
<contactNumber>contactNumber</contactNumber>	String (255)	O	The merchant can create a contact number in this data element. This element must be present if any of the billingDetails.contact elements has been populated.	+27 21 555 1234
<email>test@email.com</email>	String (255)	C	The merchant can create an email address in this data element. This element must be present if any of the billingDetails.contact elements has been populated.	contact@yourdomain.com
</contact>				
<address>		O		
<address1>address1</address1>	String (255)	O	The merchant can create an address in this data element. This element must be present if any of the billingDetails.address elements has been populated.	1 Infinite Loop
<address2>address2</address2>	String (255)	O	The merchant can create an address in this data element. This element must be present if any of the billingDetails.address elements has been populated.	Main Building
<address3>address3</address3>	String (255)	O	The merchant can create an address in this data element. This element must be present if any of the billingDetails.address elements has been populated.	Cupertino
<suburb>suburb</suburb>	String (255)	O	The merchant can create a suburb in this data element. This element must be present if any of the billingDetails.address elements has been populated.	Palo Alto
<city>city</city>	String (255)	O	The merchant can create a city in this data element. This element must be present if any of the billingDetails.address elements has been populated.	California
<postalCode>12345</postalCode>	String (255)	O	The merchant can create a postal code in this data element. This element must be present if any of the billingDetails.address elements has been populated.	95014
<country>ZA</country>	String (2)	O	The merchant can create a country in this data element. This element must be present if any of the billingDetails.address elements has been populated.	US
</address>				
</billingDetails>				
<shippingDetails>				
<contact>				
<firstName>firstName</firstName>	String (255)	O	The merchant can create a first name in this data element. This element must be present if any of the contact elements has been populated	John
<lastName>lastName</lastName>	String (255)	O	The merchant can create a last name in this data element. This element must be present if any of the contact elements has been populated	Doe
<company>company</company>	String (255)	O	The merchant can create a company name in this data element. This element must be present if any of the shippingDetails.contact elements has been populated.	Private
<contactNumber>contactNumber</contactNumber>	String (255)	O	The merchant can create a contact number in this data element. This element must be present if any of the shippingDetails.contact elements has been populated.	+27 21 555 1234
<email>test@email.com</email>	String (255)	O	The merchant can create an email address in this data element. This element must be present if any of the shippingDetails.contact elements has been populated.	contact@yourdomain.com
</contact>				
<address>				
<address1>address1</address1>	String (255)	O	The merchant can create an address in this data element. This element must be present if any of the billingDetails.address elements has been populated.	1 Infinite Loop
<address2>address2</address2>	String (255)	O	The merchant can create an address in this data element. This element must be present if any of the billingDetails.address elements has been populated.	Main Building
<address3>address3</address3>	String (255)	O	The merchant can create an address in this data element. This element must be present if any of the billingDetails.address elements has been populated.	Cupertino
<suburb>suburb</suburb>	String (255)	O	The merchant can create a suburb in this data element. This element must be present if any of the billingDetails.address elements has been populated.	Palo Alto
<city>city</city>	String (255)	O	The merchant can create a city in this data element. This element must be present if any of the billingDetails.address elements has been populated.	California
<postalCode>12345</postalCode>	String (255)	O	The merchant can create a postal code in this data element. This element must be present if any of the billingDetails.address elements has been populated.	95014
<country>ZA</country>	String (2)	O	The merchant can create a country in this data element. This element must be present if any of the billingDetails.address elements has been populated.	US
</address>				
</shippingDetails>				
<notification>		O		
<email>test@email.com</email>	String (255)	O	The merchant can create a email address where a transaction notification should be sent to in this data element. This is only applicable if notifications is enabled in the console.	contact@yourdomain.com
<mobile>+72831231234</mobile>	String (255)	O	The merchant can create a mobile number where a transaction notification should be sent to in this data element. This is only applicable if notifications is enabled in the console.	+27 21 555 1234
</notification>				
<salesItems>		O		
<item>		O	Required once when <salesItems> is used	
<description>description1</description>	**String (255)**	**O**	**The merchant can create a description in this data element. This is the description of the sales item.**	**A small sales item**
<unitPrice>1.00</unitPrice>	Decimal (6.2)	O	The merchant can create a unit price in this data element. This is the value of the single sales item.	0.99
<quantity>1</quantity>	Integer (6)	O	The merchant can create the quantity in this data element. This is the quantity of the sales items.	10
<totalAmount>1.00</totalAmount>	Decimal (6.2)	O	The merchant can create the total mmount in this data element. This is the total of the unit price times the quantity.	9.90
</item>				
<item>		O		
<description>description1</description>	String (255)	O	The merchant can create a description in this data element. This is the description of the sales item.	Another small sales item
<unitPrice>1.00</unitPrice>	Decimal (6.2)	O	The merchant can create a unit price in this data element. This is the value of the single sales item.	1.00
<quantity>1</quantity>	Integer (6)	O	The merchant can create the quantity in this data element. This is the quantity of the sales items.	5
<totalAmount>1.00</totalAmount>	Decimal (6.2)	O	The merchant can create the total mmount in this data element. This is the total of the unit price times the quantity.	5.00
</item>				
</salesItems>				
<browserDetails>		O		
<userAgent>Test</userAgent>	String (255)	O	The merchant can create a browser user agent in this data element.	Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 5.1; GTB6; InfoPath.1; .NET CLR 2.0.50727; .NET CLR 3.0.04506.30; .NET CLR 3.0.04506.648; .NET CLR 3.0.4506.2152; .NET CLR 3.5.30729)
<browserHeader>Test</browserHeader>	String (255)	O	The merchant can create a browser header in this data element.	image/gif, image/x-xbitmap, image/jpeg, image/pjpeg, application/vnd.ms-excel, application/vnd.ms-powerpoint, application/msword, application/xaml+xml, application/vnd.ms-xpsdocument, application/x-ms-xbap, application/x-ms-application, application/x-shockwave-flash, */*
<ipAddressv4>000.000.000.000</ipAddressv4>	Integer (3.3.3.3)	O	The merchant can create an ipAddressv4 in this data element.	216.58.210.78
<ipAddressv6>00:00:00:00:00:00:00:00</ipAddressv6>	String (255)	O	The merchant can create an ipAddressV6 in this data element.	FF:EE:DD:CC:BB:AA:10:00
</browserDetails>				
<fraudDetails>		C	Required when fraud module is enabled	
<uci>uci1</uci>	String (255)	C	The merchant can create a unique ID that MyGate will ink to a credit card processed on an initial transaction. If the card is different on a subsequent transaction, then the merchant can configure to flag or fail the transaction.	UCI_Client967
<deviceID>deviceID1</deviceID>	String (255)	C	This is an MD5 Hash value that can be generated by including the MyGate fingerprint.js file on the checkout page to retrieve the shopper's device ID. Alternatively, the merchant can create their own device ID for the shopper.	A57B5ECFEAE40A19D373E2E8A0BCB9FE
</fraudDetails>				
<businessRules>		O		
<doFraudValidation>false</doFraudValidation>	bit	O	The merchant can enable a "per transaction" fraud check. This is only applicable when the fraud module is enabled in the MyGate Web Console.	0 = False 1 = True
<doAddressVerification>true</doAddressVerification>	bit	O	The merchant can enable a "per transaction" address verification check. This is only applicable when the fraud module is enabled in the MyGate Web Console.	0 = False 1 = True
<doCardVerification>true</doCardVerification>	bit	O	The merchant can enable a "per transaction" card verification check. This is only applicable when the fraud module is enabled in the MyGate Web Console.	0 = False 1 = True
</businessRules>				1 = True
</xmlField>				

Capture (Action 3)

XML	Data Type & Length	Presence	Comments	Example Data
<xmlField>				
<applicationUID>00000000-0000-0000-0000-000000000000</applicationUID>	GUID	M	An ApplicationUID is linked to your website or application. A merchant can have multiple ApplicationUID's. The ApplicationUID is linked to the MerchantUID and is issued by MyGate.	5A02E47D-7E2E-452B-A940-E3E946265037
<transactionAuth>				
<transactionIndex>00000000-0000-0000-0000-000000000000</transactionIndex>	GUID	M	The transaction index is a unique identifier created by MyGate for each transaction for tracking and reconciliation purposes. The transaction index is required if merchant account is 3D Secure enabled or for a follow-on action.	79958A8D-0C7B-4038-8E2E-8948E1D678E1
</transactionAuth>				
<merchantReference>merchantReference</merchantReference>	String (255)	C	This is a unique reference that a merchant can generate to track and identify a transaction.	UniqueRef123_14
<terminal>terminal1</terminal>	String (255)	O	This is used to identify the origination point of the transaction.	website, moto, mobile
<amount>1.01</amount>	Decimal (6.2)	O	This data element must contain a valid numeric data and have two decimal places.	1024.56
<billingDetails>		O	If billing details change since the Authorise Request	
<customerID>customerID</customerID>	String (255)	O	The merchant can create a client/customer ID in this data element to identify the card holder or customer in the merchant's system.	Cust1234
<invoiceID>invoiceID</invoiceID>	String (255)	O	The merchant can create an invoice ID in this data element to identify invoice in their system.	Inv-123
<invoiceDescription>Invoice for testing</invoiceDescription>	String (255)	O	This is the description of the invoice in the merchant's system.	Sales Invoice
<contact>		O		
<firstName>firstName</firstName>	String (255)	O	The merchant can create a first name in this data element. This element must be present if any of the contact elements has been populated	John
<lastName>lastName</lastName>	String (255)	O	The merchant can create a last name in this data element. This element must be present if any of the contact elements has been populated	Doe
<company>company</company>	String (255)	O	The merchant can create a company name in this data element. This element must be present if any of the billingDetails.contact elements has been populated.	Private
<contactNumber>contactNumber</contactNumber>	String (255)	O	The merchant can create a contact number in this data element. This element must be present if any of the billingDetails.contact elements has been populated.	+27 21 555 1234
<email>test@email.com</email>	String (255)	O	The merchant can create an email address in this data element. This element must be present if any of the billingDetails.contact elements has been populated.	contact@yourdomain.com
</contact>				
<address>		O		
<address1>address1</address1>	String (255)	O	The merchant can create an address in this data element. This element must be present if any of the billingDetails.address elements has been populated.	1 Infinite Loop
<address2>address2</address2>	String (255)	O	The merchant can create an address in this data element. This element must be present if any of the billingDetails.address elements has been populated.	Main Building
<address3>address3</address3>	String (255)	O	The merchant can create an address in this data element. This element must be present if any of the billingDetails.address elements has been populated.	Cupertino
<suburb>suburb</suburb>	String (255)	O	The merchant can create a suburb in this data element. This element must be present if any of the billingDetails.address elements has been populated.	Palo Alto
<city>city</city>	String (255)	O	The merchant can create a city in this data element. This element must be present if any of the billingDetails.address elements has been populated.	California
<postalCode>12345</postalCode>	String (255)	O	The merchant can create a postal code in this data element. This element must be present if any of the billingDetails.address elements has been populated.	95014
<country>ZA</country>	String (2)	O	The merchant can create a country in this data element. This element must be present if any of the billingDetails.address elements has been populated.	US
</address>				
</billingDetails>				
<shippingDetails>			If shipping details change since the auth	
<contact>				
<firstName>firstName</firstName>	String (255)	O	The merchant can create a first name in this data element. This element must be present if any of the contact elements has been populated	John
<lastName>lastName</lastName>	String (255)	O	The merchant can create a last name in this data element. This element must be present if any of the contact elements has been populated	Doe
<company>company</company>	String (255)	O	The merchant can create a company name in this data element. This element must be present if any of the shippingDetails.contact elements has been populated.	Private
<contactNumber>contactNumber</contactNumber>	String (255)	O	The merchant can create a contact number in this data element. This element must be present if any of the shippingDetails.contact elements has been populated.	+27 21 555 1234
<email>test@email.com</email>	String (255)	O	The merchant can create an email address in this data element. This element must be present if any of the shippingDetails.contact elements has been populated.	contact@yourdomain.com
</contact>				
<address>				
<address1>address1</address1>	String (255)	O	The merchant can create an address in this data element. This element must be present if any of the billingDetails.address elements has been populated.	1 Infinite Loop
<address2>address2</address2>	String (255)	O	The merchant can create an address in this data element. This element must be present if any of the billingDetails.address elements has been populated.	Main Building
<address3>address3</address3>	String (255)	O	The merchant can create an address in this data element. This element must be present if any of the billingDetails.address elements has been populated.	Cupertino
<suburb>suburb</suburb>	String (255)	O	The merchant can create a suburb in this data element. This element must be present if any of the billingDetails.address elements has been populated.	Palo Alto
<city>city</city>	String (255)	O	The merchant can create a city in this data element. This element must be present if any of the billingDetails.address elements has been populated.	California
<postalCode>12345</postalCode>	String (255)	O	The merchant can create a postal code in this data element. This element must be present if any of the billingDetails.address elements has been populated.	95014
<country>ZA</country>	String (2)	O	The merchant can create a country in this data element. This element must be present if any of the billingDetails.address elements has been populated.	US
</address>				
</shippingDetails>				
<salesItems>			If sales items change since the auth	
<item>		O	Required **once** when <salesItems> is used	
<description>description1</description>	String (255)	O	item.	A small sales item
<unitPrice>1.00</unitPrice>	Decimal (6.2)	O	item.	0.99
<quantity>1</quantity>	Integer (6)	O	items.	10
<totalAmount>1.00</totalAmount>	Decimal (6.2)	O	The merchant can create the total mmount in this data element. This is the total of the unit price times the quantity.	9.90
</item>				
<item>				
<description>description1</description>	String (255)	O	item.	Another small sales item
<unitPrice>1.00</unitPrice>	Decimal (6.2)	O	item.	1.00
<quantity>1</quantity>	Integer (6)	O	items.	5
<totalAmount>1.00</totalAmount>	Decimal (6.2)	O	The merchant can create the total mmount in this data element. This is the total of the unit price times the quantity.	5.00
</item>				
</salesItems>				
</xmlField>				

Auth Reversal (Action 2)

XML	Data Type & Length	Presence	Comments	Example Data
<xmlField>				
<applicationUID>00000000-0000-0000-0000-000000000000</applicationUID>	GUID	M	An ApplicationUID is linked to your website or application. A merchant can have multiple ApplicationUID's. The ApplicationUID is linked to the MerchantUID and is issued by MyGate.	5A02E47D-7E2E-452B-A940-E3E946265037
<transactionAuth>				
<transactionIndex>00000000-0000-0000-0000-000000000000</transactionIndex>	GUID	M	The transaction index is a unique identifier created by MyGate for each transaction for tracking and reconciliation purposes. The transaction index is required if merchant account is 3D Secure enabled or for a follow-on action.	79958A8D-0C7B-4038-8E2E-8948E1D678E1
</transactionAuth>				
<merchantReference>merchantReference</merchantReference>	String (255)	O	This is a unique reference that a merchant can generate to track and identify a transaction.	UniqueRef123_14
<terminal>terminal1</terminal>	String (255)	O	This is used to identify the origination point of the transaction.	website, moto, mobile
</xmlField>				

Credit (Actions 4,12)

XML	Data Type & Length	Presence	Comments	Example Data
<xmlField>				
<applicationUID>00000000-0000-0000-0000-000000000000</applicationUID>	GUID	M	An ApplicationUID is linked to your website or application. A merchant can have multiple ApplicationUID's. The ApplicationUID is linked to the MerchantUID and is issued by MyGate.	5A02E47D-7E2E-452B-A940-E3E946265037
<transactionAuth>				
<transactionIndex>00000000-0000-0000-0000-000000000000</transactionIndex>	GUID	M	The transaction index is a unique identifier created by MyGate for each transaction for tracking and reconciliation purposes. The transaction index is required if merchant account is 3D Secure enabled or for a follow-on action.	79958A8D-0C7B-4038-8E2E-8948E1D678E1
</transactionAuth>				
<merchantReference>merchantReference</merchantReference>	String (255)	C	This is a unique reference that a merchant can generate to track and identify a transaction.	UniqueRef123_14
<terminal>terminal1</terminal>	String (255)	O	This is used to identify the origination point of the transaction.	website, moto, mobile
<amount>1.24</amount>	Decimal (6.2)	O	This data element must contain a valid numeric data and have two decimal places. Amount cannot be greater than the original Sale or Captured amount.	1024.56
</xmlField>				

Response Message Body (All Actions, except Action 19)

XML	Data Type & Length	Presence	Comments	Example Data
<responseMessage>				
<status></status>	bit	M	This is the status from the Request, resulting in either a successful or failed transaction.	-1 = Failed 0 = Successful 1 = Successful with warnings
<uidTransactionIndex></uidTransactionIndex>	GUID	M	The transaction index is a unique identifier created by MyGate for each transaction for tracking and reconciliation purposes. The transaction index is required if merchant account is 3D Secure enabled or for a follow-on action.	79958A8D-0C7B-4038-8E2E-8948E1D678E1
<dtRequestReceived></dtRequestReceived>	hh:mm:ss	M	The date and time stamp that the transaction was received.	'2015-08-04 15:13:24
<dtResponseSent></dtResponseSent>	hh:mm:ss	M	The date and time stamp that the transaction was returned.	2015-08-04 15:13:26
<warnings>		C		
<warning>		C	Sent at least once when <warnings> is used. There could be multiple warning nodes if more than one warning occurred.	
<code></code>	String (11)	C	The error or warning code that was generated by the MyGate System. The error is formatted as interface, module and error code, and is seperated by fullstops. Error codes are generated as an alert that may required further investigate. Please refer to our GitHub repository for a full listing of Error Codes.	API.011.007
<message></message>	String (255)	C	The error or warrning message that was generated by the MyGate System.	Invalid card holder
<description></description>	String (255)	C	Error or warning descriptions are generated as an alert to the merchant to provide detailed descriptions about the warning.	The card holder details are invalid.
</warning>				
</warnings>				
<errors>		C		
<error>		C	Required alteast once when <errors> is used.	
<code></code>	String (3)	C	The error or warning code that was generated by the MyGate System. The error is formatted as interface, module and error code, and is seperated by fullstops. Error codes are generated as an alert that may required further investigate. Please refer to our GitHub repository for a full listing of Error Codes.	API.014.027
<message></message>	String (255)	C	The error or warrning message that was generated by the MyGate System.	Declined by Service Provider.
<description></description>	String (255)	C	Error or warning descriptions are generated as an alert to the merchant to provide detailed descriptions about the warning.	The service provider declined the transaction.
</error>				
</errors>				
<mgMessage>		C		
<cardCountry></cardCountry>	String (255)	C	The country that the card was issued from according to a Bin Lookup.	United Kingdom
<currencyCode></currencyCode>	String (3)	C	This is the ISO code for the currency that was loaded against the MyGate Application and processed with.	USD
</mgMessage>				
<fspMessage>		C	The FSP message is the response from the acquirer / bank authorisation system. This will be present for successful and declined transactions.	
<code></code>	Integer (3)	C	This is the response code from the financial service provider.	201
<message></message>	String (255)	C	The description of the fspMessage.code.	Declined
<authorizationCode></authorizationCode>	Integer (6)	C	The unique authorisation code that was generated by the financial service provide system and is only applicable for Authorise Actions (1 & 5)	123456
<processorResponse></processorResponse>	String (255)	C	The response that was generated by the acquirer.	The service provider declined the transaction.
</fspMessage>				
<tdsLookup>		C	Returned when 3DS Lookup Request is performed.	
<code></code>	Integer (3)	C	This is the code returned from the 3DS Lookup Request.	071
<message></message>	String (255)	C	Indicates the outcome of a 3D Secure Lookup.	Lookup unavailable.
<authRequired></authRequired>	String (1)	C	This data element indicates whether to perform a 3DS Authenticate (Action 15) or to proceeed with processing an Authorise (Action 1) or Sale (Action 5) .	(Action 15) N = You can perform an Authorise (Action 1) or Sale (Action 5) N.B. Please refer to liabilityShift data element to determine risk as not all transactions have liability shift.
<liabilityShift></liabilityShift>	String (1)	C	Liability shift indicates whether there is a shift of liability to the merchant.	Y = Yes N = No
<eciFlag></eciFlag>	Integer (2)	C	eCommerce Indicator Flag indicates the risk level associated with the transaction.	05 (Visa Authenticated) 06 (Visa Attempt) 07 (Visa Undetermined) 00 (Mastercard Undetermined) 01 (MasterCard Attempt) 02 (MasterCard Authenticated)
<enrolled></enrolled>	String (1)	C	Status of Authentication eligibility. If the value is NOT (Y), then the card holder is NOT eligible for 3D Secure Authentication.	Y = Enrolled N = Not enrolled
<acsUrl></acsUrl>	String (255)	C	The fully qualified URL to redirect the card holder to complete the Authentication transaction.	https://acssb.bankserv.co.za/
<payload></payload>	String (255)	C	The encoded payment data generated by MAPS. Available if Enrolled = Y.	eNpVUk1TwjAQ/SsM402nSUuKwSC/3gSoH5PL
</tdsLookup>				
<tdsAuth>		C		
<code></code>	Integer (3)	C	This is the code returned from the 3DS Authenticate Request.	997
<message></message>	String (255)	C	Indicates the outcome of a 3D Secure Authenticate.	Authentication unavailable
<liabilityShift></liabilityShift>	String (1)	C	Liability shift indicates whether there is a shift of liability to the merchant.	Y = Yes N = No
<eciFlag></eciFlag>	Integer (2)	C	eCommerce Indicator Flag indicates the risk level associated with the transaction.	05 (Visa Authenticated) 06 (Visa Attempt) 07 (Visa Undetermined) 00 (Mastercard Undetermined) 01 (MasterCard Attempt) 02 (MasterCard Authenticated)
<paresStatus></paresStatus>	String (1)	C	This data element indicates which transactions can be processed for an Authorise (Action 1) or Sale (Action 5).	A = Attempt - can be processed U = Undetermined - can be processed N = Failed Authentication - should be failed N.B. Please refer to liabilityShift data element to determine risk as not all paresStatus' have liability shift.
<signatureVerification></signatureVerification>	String (1)	C	Transaction signature status identifier.	Y = Indicates that the signature of the PARes has been validated successully and that the message can be trusted. N = Indicates that the PARes could not be validated. This result could be for a variety of reasons; tampering, certificate expiration, etc., and the result should not be trusted.
<xid></xid>	String (28)	C	This is a unique identifier generated by the ACS for the 3D Secure Authentication transaction that was processed.	k4Vf36ijnJX54kwHQNqUr8/ruvs=
<cavv></cavv>	String (28)	C	This is the value generated by the ACS that the signifying that the transaction has been successfully authenticated.	AAAAAAAAAAAAAAAAAAAAAAAA=
</tdsAuth>				
<rptReports>xml report data</rptReports>		C	Required for any report. See report xml formats	
</responseMessage>				

Request Message Body (Reporting - Action 19)

XML	Length	Presence	Comments	Example Data
xmlField>				
<applicationUID>00000000-0000-0000-0000-000000000000</applicationUID>	GUID	M	multiple ApplicationUID's. The ApplicationUID is linked to the MerchantUID and is issued by MyGate.	5A02E47D-7E2E-452B-A940-E3E946265037
<reportTypeID>01</reportTypeID>	Integer (2)	M	transactions' status based on the transactionIndex or merchantReference submitted.	01 = getTransactionStatus
<reportFilter>				
<transactionIndex>00000000-0000-0000-0000-000000000000</transactionIndex>	GUID	C	transaction for tracking and reconciliation purposes. The transaction index is required if merchant account is 3D Secure enabled or for a follow-on action. Required when <merchantReference> is not used.	79958A8D-0C7B-4038-8E2E-8948E1D678E1
<merchantReference>merchantReference</merchantReference>	String (255)	C	This was the unique reference that a merchant generated to track and identify a transaction. Required when <transactionIndex> is not used.	UniqueRef123_14
</reportFilter>				
<terminal>Terminal1 - David</terminal>	String (255)	O	This is used to identify the origination point of the transaction.	website, moto, mobile
</xmlField>				

Response Message Body (Reporting - Action 19 – ReportType 01)

XML	Length	Presence	Comments	Example Data
<rptTransactionStatus>		M		
<lastActionDate></lastActionDate>	hh:mm:ss	M	transaction.	2015-08-04 15:13:24
<transactionIndex></transactionIndex>	GUID	M	This was the unique transaction index created by MyGate for this transaction.	79958A8D-0C7B-4038-8E2E-8948E1D678E1
<merchantReference></merchantReference>	String (255)	M	transaction.	
<status></status>	String (255)	M	This is the last Status of the request transaction.	Authorised
<value></value>	Decimal (6.2)	M	This was the value of the transaction.	132.46
</rptTransactionStatus>				