



Quick Start Guide
HTTP API Quick Start (SMS & OBS)

Table of Contents

1. Introduction

1.1 Brief Introduction to the Higate Platform.....	Page 3
1.2 Account, Logins & Service Codes.....	Page 3
1.3 Integration process.....	Page 3

2. Requirements

2.1 Test Account.....	Page 4
2.2 Routing Configuration.....	Page 4
2.3 Business Rules.....	Page 6
2.4 Product Portal.....	Page 7

3. SMS MT

3.1 Formulating and sending a SMS MT.....	Page 8
3.2 Handling & interpreting the Call-Back Response.....	Page 9

4. SMS MO

4.1 Receiving a SMS MO.....	Page 11
-----------------------------	---------

5. OBS

5.1 Formulating and Sending an OBS request.....	Page 12
5.2 Handling and Interpreting the Call-Back Response.....	Page 13
5.3 Starting a new subscription.....	Page 14
5.4 Stopping an existing subscription.....	Page 15

6. Compliance

6.1 Welcome & Reminder Message.....	Page 16
6.2 Compliance Checking.....	Page 16

7. Final Integration

7.1 Switch over to main account, login and service codes.....	Page 16
---	---------

8. FAQ

8.1 Error Handling.....	Page 17
8.2 Status Codes.....	Page 17
8.3 Network IDs.....	Page 17
8.4 XML Substitutions.....	Page 17

9. XML Examples

9.1 SMS MT.....	Page 18
9.2 SMS MO.....	Page 18
9.3 OBS Request.....	Page 19
9.4 OBS DOI opt-in and opt-out.....	Page 19
9.5 HTTP Response.....	Page 20
9.6 Generic Response.....	Page 20
9.7 SMS MT – Callback XML.....	Page 21
9.8 OBS Request – Callback XML.....	Page 21

Version History

Version	Author	Contact	Date	Notes
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1.2	Martin de Jager	martin@intarget.mobi	13/11/2015	Updated CI & XML Examples

1. Introduction

1.1 Brief Introduction to the Higate Platform

The Higate system is a mobile services aggregation platform that provides client applications access to the various mobile services (bearers) offered by the local Mobile Network Operators of a country or region.

The XML/HTTP API enables authorized users to send and receive multiple bearer services such as SMS, PSMS, OBS and USSD. This guide provides a “quick start” to using the Higate platform and only covers the main elements needed to connect, send and receive bearer services via a XML/HTTP API.

Higate supports both HTTP 1.0 and 1.1 with some exceptions. The “keep alive” header option is always ignored and the default keeping the connection is not supported. The Higate API will always close the connection after the response has been sent.

HTTPS connections are not supported due to the large overhead of SSL.

1.2 Account, Logins & Service Codes

Higate allows for the creation of ‘Higate Accounts’, and under each account there may be one or more associated ‘Client Logins’ (binds) which allow for the separation of bearer services if needed. An example would be separating SMS and USSD.

Higate Service Codes are unique, system-wide alphanumeric strings of up to 8 characters that allow for a finer level of control when configuring Higate Logins. They are in effect sub-logins, and all transaction routing rules are keyed on these names. Whenever a Login transacts with the Higate, there is an associated Service code, which may be explicitly defined or defaulted by the Higate Platform (if it is not specified by the client application).

1.3 Integration process

The below Integration process is laid out in the quickest manner that covers the integration of client side applications to the Higate API. It is strongly recommended that this guide be utilised in conjunction with the main HTTP API documentation & mentioned side documentation as this guide only provides main overview information. The HTTP API document will provide additional details into the XML parameters, bearers and advanced functions.

For the purpose of simplicity, this guide provides an overview the main commonly used services. These been SMS, Premium SMS, OBS (Online Billing Services) and DOI (Double Opt-In).

2. Requirements

2.1 Test Account/Environment

During your testing and integration period, Integrat will provide you with a live test account that you can use to send SMS's and OBS requests. These accounts are preconfigured for SMS & OBS bearers and include their own logins, service codes & OBS registered products. If you are using Short-codes as a part of your service, please notify your Sales Manager/Account Manager when you request a simulation account so this short code can be bound to the test account. You will need to provide a Call-Back URL for receiving status updates and MO's.

Test Accounts are live testing environments and are done in conjunction with the Service Delivery department. Each Test Account will be loaded with sufficient credits for testing SMS, OBS and DOI functionality. It is important that your application is configured correctly to respond to Higate POSTs and that the responses are handled accordingly. The configuration with testing accounts will differ when the main account is configured and once you have completed your testing and Integration.

2.2 Routing Configuration

Your Account Manager will provide you with routing configuration that will be needed during your testing and integration into Higate.

Each account login has a routing sheet (Routing Configuration) associated with it which contains all the necessary information to transact with the Higate platform. It is very important to review this information to ensure proper operation of the services. The routing sheet will be provided with each test account and again on final integration. Please see below example and explanation of the routing details.

Figure 2.1 – Routing Sheet / Configuration

Login Details

```

-----
ID                : 1234
Name              : USERNAME
Password          : PASSWORD
Created           : 05/03/17 12:49:21
Status            : Enabled
API Type          : HTTP
Default Service   : SERVICECODE
Default URL       : http://www.yourdomain.com/reciever.php
Auto-drawdown     : Yes
Drawdown Amount   : 26000 Credits
Final Status Only : False
  
```

```

Service Codes  Vod Service Code  URL
-----
  
```

```

SERVICECODE          INT00123          http://www.yourdomain.co.za/higate.php
  
```

Transmit (MT) routings by service code

```

-----
SERVICECODE
  
```

SMS

```

Rule: By Network
  
```

```

MTN
  
```

```

GateID: 272
  
```

```

Source Address: 27839300365          PUBLIC          Tags ENABLED  117
  
```

```

Rule: By Network
  
```

```

CellC
  
```

```

GateID: 92
  
```

```

Source Address: 27840004683          PUBLIC          Tags ENABLED  117
  
```

```

Rule: By Network
  
```

```

Vodacom
  
```

```

GateID: 209
  
```

```

Source Address: 27820048062          PUBLIC          Tags ENABLED  117
  
```

USS

```

Rule: Default
  
```

```

GateID: 299
  
```

```

OBS
  
```

```

Rule: By Network
  
```

```

CellC
  
```

```

GateID: 203
  
```

```

Rule: By Network
  
```

```

Vodacom
  
```

```

GateID: 211
  
```

```

Rule: By Network
  
```

```

MTN
  
```

```

GateID: 254
  
```

```

VSR
  
```

```

Rule: Default
  
```

```

GateID: 316
  
```

Receiver (MO) SMS routings by service code

```

-----
SERVICECODE
  
```

```

54321          by Default Number
  
```

Login Details

Name:	The login name, to be used as the value for the “UserID” field.
Password:	The password for the login, to be used as the value for the “Password” parameter.
Status:	The status of the login. This should be “Enabled” to be able to transact.
API Type:	The type of interface for the login.
Default Service:	The default service code to use should a service code not be specified in the transaction.
Default URL:	The default call back URL should a specific URL not be specified for the service.
Auto-drawdown:	Automatic drawdown of credits from the main Higate account.
Drawdown Amount:	The amount of credits that must be drawn when the Client Login is depleted.
Final Status Only:	Toggle whether to receive intermittent status notifications or final notifications only.

Service Codes

Each login can have a number of service codes each having specific routing information. A login would typically use more than one service code if different routes are required for different services, such as a bulk SMS service and a priority SMS service.

If more than one service code is linked to an account, then that service code needs to be specified as the value of the ‘Service’ attribute, unless the service code is configured as the default service in which case this is optional.

The “Vod Service Code” is included for historical reasons but can be ignored as its meaning is transparent for the user.

Transmit (MT) routings by service code

This section shows the routing configured for the different bearers enabled on your account. The available types are SMS, OBS, USSD and VSR (voucher). For a login that has only SMS configured, only SMS routing would be displayed. A section is included for each of the services associated with the login.

Receiver (MO) SMS routings by service code

This sections shows routing configured for MO messages and lists the MSISDNs and short codes on which MO traffic is received. Note that MO traffic for the numbers configured for SMS MT routing are received by default.

2.3 Business Rules

In order for your service to go live, it must comply with WASPA and the network billing rules. Please read the respective business rules for each operator. Failure to abide by the required compliance and business rules will result in the login been suspended and/or fined. Integrat’s Compliance department will assist you if you need any clarity. Please review the respective network operator’s business rules below:

Vodacom SA:

<http://integrat.freshdesk.com/solution/categories/4000000842/folders/4000003085/articles/4000045044-vodacom-business-rules>

MTN:

<http://integrat.freshdesk.com/solution/categories/4000000842/folders/4000003085/articles/4000018418-mtn-business-rules>

Cell C:

<http://integrat.freshdesk.com/solution/categories/4000000842/folders/4000003085/articles/4000018416-cell-c-business-rules>

Telkom Mobile SA:

<http://integrat.freshdesk.com/solution/categories/4000000842/folders/4000003085/articles/4000018429-telkom-mobile-business-rules>

2.4 Product Portal

Before any billing can be done, the billing service (Product) must be registered on the Product Portal on your account and login. This is done via the “Product Portal” tab that you can access via the Higate Web interface at:

<http://www.higate.co.za>

The Product Portal uses your products information and is provided to the network operators who match the products for online billing purposes. This is a strict requirement by the network providers to ensure the protection of its subscribers from unauthorised billing.

You can request your login details from your account manager (these login details are separate from the above mentioned ‘Client Login’ API details. There is no need to configure any products on your test account as this has been pre-configured and will be provided on request. The product portal registers important information that is used for the billing and also allows you to see the network confirmation message until its saved and registered.

When filling in the registration form on the Product Portal, you will also be given an option to view the Opt-in message before saving. It is vitally important that the correct information is entered because the product cannot be edited once saved and is permanent. Integrat cannot modify these entries as this is supplied and used by the network operators. A detailed guide on using the Product Portal can be found at:

<http://integrat.freshdesk.com/solution/categories/4000000842/folders/4000003762/articles/4000044993-product-portal-guide>

3. SMS MT

3.1 Formulating and sending a SMS MT

The below XML document is the simplest form to send a SMS message through the HTTP API. Note that keywords (such as 'SendSMS'), and XML element and attribute names (such as ToAddr), are case-sensitive.

Figure 3.1 - SMS MT

```
<Message>
  <Version Version="1.0"/>
  <Request Type="SendSMS" RefNo="1">                                <- Request type is SendSMS, including ref no. (Unique) is set by you
    <UserID>USERNAME</UserID>                                       <- Your login name
    <Password>PASSWORD</Password>                                    <- Your password
    <SendSMS ToAddr="27613177815"                                     <- The MSISDN to receive the SMS
      Validity="00020000"                                           <- Time that the SMS takes to expire if undelivered
      Service="SERVICECODE"   <- This is your service code and is case sensitive (found in your routing configuration)
      Flags="0"                                                       <- Flags that defines the SMS characteristics
      DataCoding="0">
    <Reply Tag="117"/>                                              <- Your tag (found in the routing configuration)
    <AdultRating>0</AdultRating>
    <Content Type="TEXT">Test message from Higate HTTP client</Content> <- The Message content
  </SendSMS>
</Request>
</Message>
```

You can post the above example as a HTTP POST with *content-type "text/xml; charset=iso-8859-1"* to:

xhg-lb1.higate.co.za:8888/hg_request

If all goes well, you will receive a successful HTTP response of content-type text/xml. It will contain XML that looks similar to this:

Figure 3.2 - Successful HTTP Response from Higate

```
<Response status_code='0'>
  <Data name='msg_generic_rsp'>
    <field name='msg_no' value='4' />
    <field name='seq_no' value='1504089' />
  </Data>
</Response>
```

It is important to note that all XML responses contain a status code in the Response element (*status_code*). A zero (0) status code means success. Any other value means failure or queued/pending state. All current status codes are available in section 8.2 (Status Codes).

The fields of interest always appear inside the Data element. In the response to a 'SendSMS' request, there's really only one important field (besides *status_code*, of course): the '*seq_no*' field. You can use this information to correlate the corresponding status and delivery notifications that Higate sends to your URL. In other words, when you receive a status notification on your call back URL, it will contain a '*seq_no*' field whose value matches the '*seq_no*' value in one of the requests you sent earlier.

Please be aware that a successful XML response (namely, *status_code*='0') only means that your request was accepted for processing, not that it completed successfully.

3.2 Handling & interpreting the Call-Back Response

You will only know whether or not it completed successfully when you get a status notification to your call back URL. Notifications may be sent at each stage of processing your request, for example, when it is queued, acknowledged, and delivered.

On the other hand, you may only receive a delivery notification, but you will get at least one notification of the final status of the SMS. It is only when you receive a delivery notification that you can be sure that the SMS was sent to the recipient. Of course, nobody can guarantee that the recipient actually read the SMS!

As mentioned earlier, you have a web site to receive status notifications. Higate POSTs these status notifications to your call back URL when your message changes status, such as when it gets a delivery notification from a network. It POSTs these notifications in XML format to your URL with a content-type of "text/xml; charset=iso-8859-1".

Your call back URL must respond to each POST with a XML acknowledgement with a generic success or failure notification (responses to Higate POSTs must be in content-type of "text/xml; charset=iso-8859-1"). Failure to do so will cause Higate to assume that you did not receive the message and to re-attempt delivery and take other steps to address what it thinks is an error. The two possible generic types of response are:

Figure 3.1 - Generic Success Response to Higate

```
<Response status='0' />
```

Figure 3.2 – Generic Error Response to Higate

```
<Response status='-1'>
  <Data name="error">
    <field name="reason"
      value="Reason for refusing the response" />
    </Data>
  </Response>
```

Your call back URL will receive the following POST:

Figure 3.3 – Higate POST to Client Call back URL

```
<?xml version="1.0" ?>
<Message>
  <Version Version="1.0"/>
  <Response Type="OnResult" TOC="SMS" RefNo="4" SeqNo="2289859312">
    <SystemID>Higate</SystemID>
    <UserID>USERNAME</UserID>
    <Service>SERVICECODE</Service>
    <NetworkID>2</NetworkID>
    <Network ID="2" MCC="655" MNC="010"/>
    <ErrCode>0</ErrCode>
    <ErrText>SMPP Submit Error</ErrText>
    <OnResult
      Flags="0"
      Code="6"
      SubCode="0"
      Text="SMPP Submit Error"/>
  </Response>
</Message>
```

<- Request type is **OnResult**, including seq_no
 <- Your Client Login name
 <- Your service code
 <- Network ID (Section 8.3 Network IDs)
 <- Error Code if transaction failed
 <- This is the error text if the transaction failed
 <- flag settings and only appears if flags are used in the submission XML
 <- Main result code
 <- sub-code of the main status code
 <- result text

It's critical to understand that simply receiving a successful HTTP response, like a HTTP 200, is not enough to guarantee that your post succeeded. You must also check the *status_code* attribute in the Response XML element. If it's anything other than zero, there was an error posting your request. Details of the error will be provided.

4. SMS MO

4.1 Receiving a SMS MO

When a subscriber sends a message to your short code, the message is routed from the operator to Higate. In turn, Higate POSTs the MO to your nominated call-back URL in a XML format. Please see below example:

Figure 4.1 - SMS MO

<pre> <?xml version="1.0" ?> <Message> <Version Version="1.0"/> <Response Type="OnReceiveSMS"> <SystemID>Higate</SystemID> <UserID>USERNAME </UserID> <Service>SERVICECODE</Service> <OnReceiveSMS SeqNo="123456789" Sent="1232815567" FromAddr="27123456789" ToAddr="12345" ToTag="117" Value="150" NetworkID="2" AdultRating="0"> <Content Type="TEXT">Message copy</Content> </OnReceiveSMS> </Response> </Message> </pre>	<p><- Request type is OnRecieveSMS (indicates a direct reply or MO)</p> <p><- Your Client Login name</p> <p><- Your service code</p> <p><- sequence number</p> <p><- The subscriber MSISDN that the MO originated</p> <p><- This is the address the MO was sent to</p> <p><- reply tag</p> <p><- The cost the subscriber incurred to send the message</p> <p><- Network ID</p> <p><- Message contents sent to the short-code</p>
---	---

As with SMS MT, your application will need to provide the same response as with any Higate POST to your system:

Figure 4.2 – Generic Success Response to Higate

```
<Response status='0' />
```

Figure 4.3 – Generic Error Response to Higate

```

<Response status='-1'>
  <Data name="error">
    <field name="reason"
      value="Reason for refusing the response" />
    </Data>
  </Response>

```

Failure to respond correctly will cause Higate to assume that you did not receive the message and to reattempt delivery and take other steps to address what it thinks is an error. There are two possible types of response, shown below.

You do not need to provide an error response to Higate; however, if you wish to handle errors internally, the Generic Success response is still necessary.

5. OBS

5.1 Formulating and Sending an OBS Request

The below XML document is the simplest form to send an OBS message through the HTTP API. It is at this point that you will now require the information from the Product Portal. The below XML requires the Login Name, Service, Value, Subscriber Start Date and Category (Product). All these details are listed on your Product Portal.

Figure 5.1 – OBS Request

```
<Message>
  <Version Version="1.0"/>
  <Request Type="OBSRequest" RefNo="4">                                <- Request type is OBSRequest, including ref no. (Unique) is set by you
    <UserID>USERNAME</UserID>                                          <- Your login name
    <Password>PASSWORD</Password>                                       <- Your password
    <OBSRequest Validity="00020000">
      Flags="0">                                                        <- flag settings and only appears if flags are used in the submission XML
      <Ticket Type="Mobile"
        OBSService=""
        Service="SERVICECODE"    <- This is your service code and is case sensitive (found in your routing configuration)
        SubService=""
        ChargeAddr="0613177895"    <- The MSISDN to charge
        Description=""
        Value="100"/>          <- The billing value in cents (The value is taken from the product portal entry)
      <Subscr Started="2014-11-27 12:15:52">    <- Subscription start date (This never changes after the subscriber Opts-In)
        Category="C1OBSTest"    <- The category (Product) is taken from the Product Portal entry and is case sensitive
        Trigger=""/>            <- Trigger type, such as a MO, then insert MO:xxxx (last 4 digits of the seqno MO), WAP or leave blank
      </OBSRequest>
    </Request>
  </Message>
```

Important:

- Your Reference number is set by you and must be unique and numeric values only. Duplicates will be rejected by Higate
- Your MSISDN must be normalized with the 27 South African prefix, i.e. 0821239876 = 27821239874
- The 'Subscr Started' field is the date the subscriber first opted in (more details in section)
- The 'Category' field must use the "Product" name from your Product Portal entry and is case sensitive
- All XML text should be encoded to "text/xml; charset=iso-8859-1"
- The value must always be in cents and no decimal separators must be used, it is recommended that you round your product to the closest whole number, for example:
 - a) R1 ZAR = 100
 - b) R1.99 ZAR= 200
 - c) R 1.50 ZAR= 150

Once you have your XML ready, it's time to submit to Higate. You can POST your XML to:

xhg-lb1.higate.co.za:8888/hg_request

As with SMS or any POST to Higate, you will receive a Generic Success Response from Higate

It is also important to note that Higate issues a unique sequence number for every transaction it receives. This is very helpful when logging a support call and will assist the technical teams to identify the exact transaction and diagnose any problems with that specific transaction.

5.2 Handling and Interpreting the Call-Back Response

Now that your transaction has been received and is been processed, Higate will send one or more status notifications to the call-back URL that was set up in your routing. Just like SMS, your transaction will receive your unique “sequence number” for tracking/matching purposes.

The below example is a standard OBS call back, however, depending on the operator, this may differ. Please see the XML examples section for additional examples.

Figure 5.2 – OBS Callback (Vodacom)

```
<?xml version="1.0" ?>
<Message>
  <Version Version="1.0"/>
  <Response Type="OnOBSResponse" RefNo="3" SeqNo="2289859310">      <- Request type is ONOBSResponse, including SeqNo
  <SystemID>Higate</SystemID>
  <UserID>USERNAME</UserID>                                          <- Your login name
  <Service>SERVICECODE</Service>                                   <- Your service code
  <NetworkID>1</NetworkID>                                           <- Network ID (Section 8.3 Network IDs)
  <Network ID="1" MCC="655" MNC="010"/>                             <- This is only needed if you are using the SMPP protocol
  <Flags>0</Flags>                                                  <- reply tag
  <ResultCode>9</ResultCode>                                         <- Main result code<- Main result code
  <ResultText>Pending</ResultText>                                   <- Result text
  <ErrCode>0</ErrCode>                                              <- Error Code if transaction failed
  <ErrText></ErrText>                                              <- Error text if the transaction failed
  <OnOBSResponse Type="XML">
    <OBS><Action>CONFIRMED</Action><Result>0</Result><ResultText>Success</ResultText><Param>
      <BillingCode></BillingCode>
      <AdultRating>0</AdultRating>
      <Category>ProductName</Category>                                <- The category (Product)
      <Descr></Descr>
      <ItemID></ItemID>
      <RxSeqNo>46243614</RxSeqNo>
      <Other>
        <Vodacom>
          <Subscr>
            <Started>2014-07-29 14:54:13</Started>
          </Subscr>
          <Product Name= ProductName ' ID='2762' BillingFreq='Day' ServiceID='INT02762' Activation=' ' />
        </Vodacom>
      </Other>
    </Param>
    <Subscr Category= 'ProductName' Started='2014-07-29 14:54:13' />
  </OBS>
</OnOBSResponse>
</Response>
```

Note the response type, reference number, TOC and sequence number. The reference number will be the same number your set in your submission XML and is used so you can track your responses. The TOC identifies the type of content that has come in (OBS in this case) and lastly, the Higate sequence number for tracking on Integrat’s end.

As with the previous examples, the most important part of the call-back POST is that your Server/Application must respond with the generic success or failure response to Higate.

5.3 Starting a new subscription

Before OBS billing can be done, you need to opt the subscriber into your service. This is where the DOI process now comes in and is simple to trigger via the 'FIRST' parameter in the "Subscr Started" field. How this is done is by adding the keyword 'FIRST' after the started date/time in your XML.

This will instruct Higate that the subscriber is new and that the network DOI needs to be triggered. Higate in turn, submits the request to the respective operator and the Operator sends the confirmation message (From the Product Portal Entry you added) and awaits the subscribers response.

During this time, your initial notification update to your call back URL will remain in a "Pending" or "Pending Auth" status. Once the subscriber replies to the DOI message and accepts the subscription, the status will change to either Receipted, Approved or Acknowledged status.

From this point, you can now do normal billing without the 'FIRST' parameter. Please see example below:

Figure 4.1 - OBS Request with FIRST Parameter

```
<Message>
  <Version Version="1.0"/>
  <Request Type="OBSRequest" RefNo="4">
    <UserID>USERNAME</UserID>
    <Password>PASSWORD</Password>
    <OBSRequest Validity="00020000
      Flags="0">
        <Ticket Type="Mobile"
          OBSService=""
          Service="SERVICE1"
          SubService=""
          ChargeAddr="0613177895"
          Description=""
          Value="100"/>
        <Subscr Started="2014-11-27 12:15:52 FIRST"
          Category="C1OBSTest
          Trigger=""/>
      </OBSRequest>
    </Request>
  </Message>
```

<- Request type is **ONOBSTResponse**, including your unique reference number

<- Note the **FIRST** parameter after the started date

Remember to remove the FIRST parameter after the subscriber has been successfully subscribed to your service and you continue normal billing routines at the prescribed billing frequency of that product.

Note that this started date remains the same after the subscriber has been subscribed. It never changes and must be set to local South African time (GMT+2)

You will also notice the FIRST parameter has been included in the call back response. This is to help you as the client to record the started date of a subscriber. Optionally, you can also download your subscriber list from the Product Portal which will give you the started dates for each subscriber.

As previously mentioned, your Server/Application must respond with the generic success or failure response to Higate.

5.4 Stopping an Existing Subscription

Stopping or removing a subscription/subscriber is done the same way you add a new subscription, except instead of using the FIRST parameter, the "STOP" parameter is used. This instructs Higate to notify the networks of the subscriber's removal from OBS billing.

This is a necessary action and simply disabling billing from the client side is not enough. Any non-compliance can result in your service been suspended. Integrat does not remove subscriptions automatically if a STOP is sent to your short codes, SMS and so forth. Your application will need to recognise the STOP keyword instruction from a user and trigger an OBS request with the STOP parameter like the example below:

Figure 5.1 - OBS Request with STOP Parameter

```
<Message>
  <Version Version="1.0"/>
  <Request Type="OBSRequest" RefNo="4">
    <UserID>USERNAME</UserID>
    <Password>PASSWORD</Password>
    <OBSRequest Validity="00020000"
      Flags="0">
      <Ticket Type="Mobile"
        OBSService=""
        Service="SERVICECODE"
        SubService=""
        ChargeAddr="0613177895"
        Description=""
        Value="100"/>
      <Subscr Started="2014-11-27 12:15:52 STOP"
        Category="C1OBSTest"
        Trigger=""/>
    </OBSRequest>
  </Request>
</Message>
```

<- Request type is OnOBSResponse, including your unique reference number

<- Note the **STOP** parameter after the started date

Once this is done, the subscriber will receive a notification from the operator that the subscription has been stopped.

You will also notice the STOP parameter been included in the call back response confirming the instruction (you can remove the subscriber from your database) and as before, your Server/Application must respond with the generic success or failure response to Higate.

6. Compliance

6.1 Welcome & Reminder Message

WASPA regulation requires that you send a welcome message when you subscribe the user and also a reminder message monthly. This is a standard SMS MT that is sent and is separate from the DOI confirmation message subscribers receive which is sent by the operator. The welcome and confirmation messages are sent by the client and not Integrat or the network operators.

In the meantime, the below templates can be used as substitutes while client development/testing is under way. Please see the below examples:

Figure 6.1 - Welcome Message Example

Welcome: U r subscribed to (service name) @ R___/day (Cost + billing frequency). To unsubscribe SMS stop to (Short-code) Helpline number 011----

Figure 6.2 – Monthly Reminder Message Example

Reminder: You are subscribed to (Service name)@R---/(Cost +billing frequency). To unsub, sms STOP to short-code. For help call customer_care_number 011 ---

6.2 Compliance Checking

Once all integration has been completed in the testing environment and you are integrated into your main account. The Service Delivery teams will connect you to the compliance department for checking and assistance before your service can go live.

This is to ensure that your service conforms to WASPA standards and that good billing practise is exercised.

If you have any questions around compliance, please contact compliance@integrat.co.za

7. Final Integration

7.1 Switch Over to Main Account, Login and Service Codes

Once all development and testing has been completed, your main account will be configured and you will have the options for login and service codes to be named and configured.

You will be provided with new routing configuration and all that will be required from client end will be:

Creating your products on the Product Portal under your main account and change some (not all) parameters in your XML submissions. This will include:

- Login Name (SMS & OBS)
- Password (SMS & OBS)
- Service parameter (SMS & OBS)
- Category parameter (OBS)
- Reply Tags (SMS)

The Service Delivery department will assist in end-to-end testing to ensure that your services are operating correctly.

8. FAQ

8.1 Error Handling

For error handling, please refer to the Higate Error Handling guide. This guide covers most errors and will provide you with a basic troubleshooting step on specific errors. Any error that is not clear or unlisted, kindly provide the error code and the MSISDN number it was found on to Ticketman and we will identify the error.

Please note that Integrat is constantly updating new error codes from the operators. Please check in regularly at:

<http://integrat.freshdesk.com/solution/categories/4000000842/folders/4000003762/articles/4000040469-higate-error-handling-guide>

8.2 Status Codes

The following are general status codes and not errors specifically as these are designed to report on the transaction itself and not the OBS result.

Code	Result	Description
0	Success	Success
1	Queued	Content queued for submission to the gateway
2	Submitted	Content was submitted to the gateway
3	Acknowledged	Content was confirmed as received by operator
4	Receipted	Successful Delivery Receipt was received
5	Expired	Expiry Delivery Receipt was received
6	Failed	Transaction failed
7	Denied	Authorization Denied by subscriber
9	Pending	Pending authorization by subscriber
11	Cancelled	Cancelled

8.3 Network ID's

Operator / Telco	Network ID
Vodacom	1
MTN	2
CellC	3
Telkom Mobile	15

8.4 XML Substitutions (SMS MT)

When a transaction is submitted in plain text format it is important to substitute the XML reserved characters with the XML safe escape codes below:

Character	Substitute
&	&
'	'
"	"
<	<
>	>

9. XML Examples

9.1 SMS MT

Example: Sending a SMS MT

XML Type: SendSMS

```
<Message>
  <Version Version="1.0"/>
  <Request Type="SendSMS" RefNo="1">
    <UserID>USERNAME</UserID>
    <Password>PASSWORD</Password>
    <SendSMS ToAddr="27613177895"
      Validity="00020000"
      Service="SERVICECODE"
      Flags="0"
      DataCoding="0">
    <Reply Tag="449"/>
    <AdultRating>0</AdultRating>
    <Content Type="TEXT">Test message from Higate HTTP client</Content>
  </SendSMS>
</Request>
</Message>
```

9.2 SMS MO

Example: Receiving a MO

XML Type: OnRecieveSMS

```
<?xml version="1.0" ?>
<Message>
  <Version Version="1.0"/>
  <Response Type="OnReceiveSMS">
    <SystemID>Higate</SystemID>
    <UserID>USERNAME</UserID>
    <Service>SERVICECODE</Service>
    <OnReceiveSMS
      SeqNo="1234"
      Sent="1232815567"
      FromAddr="27123456789"
      ToAddr="12345"
      ToTag=""
      Value="150"
      NetworkID="2"
      AdultRating="0">
      <Content Type="TEXT">Message copy</Content>
    </OnReceiveSMS>
  </Response>
</Message>
```

9.3 OBS Request

Example: *OBS Silent Billing Request*

XML Type: *OBSRequest*

```
<Message>
  <Version Version="1.0"/>
  <Request Type="OBSRequest" RefNo="4">
    <UserID>USERNAME</UserID>
    <Password>PASSWORD</Password>
    <OBSRequest Validity="00020000"
      Flags="0">
      <Ticket Type="Mobile"
        OBSService=""
        Service="SERVICECODE"
        SubService=""
        ChargeAddr="27613177895"
        Description=""
        Value="100"/>
      <Subscr Started="2014-11-27 12:15:52"
        Category="C1OBSTest"
        Trigger=""/>
    </OBSRequest>
  </Request>
</Message>
```

9.4 OBS DOI opt-in and opt-out

Example: *DOI Opt-In (Starting New Subscription)*

XML Type: *OBSRequest (with FIRST parameter)*

```
<Message>
  <Version Version="1.0"/>
  <Request Type="OBSRequest" RefNo="4">
    <UserID>USERNAME</UserID>
    <Password>PASSWORD</Password>
    <OBSRequest Validity="00020000"
      Flags="0">
      <Ticket Type="Mobile"
        OBSService=""
        Service="SERVICECODE"
        SubService=""
        ChargeAddr="27613177895"
        Description=""
        Value="100"/>
      <Subscr Started="2014-11-27 12:15:52 FIRST"
        Category="C1OBSTest"
        Trigger=""/>
    </OBSRequest>
  </Request>
</Message>
```

Example: DOI Opt-Out (Stopping a Subscription)

XML Type: OBSRequest (with STOP parameter)

```
<Message>
  <Version Version="1.0"/>
  <Request Type="OBSRequest" RefNo="4">
    <UserID>USERNAME</UserID>
    <Password>PASSWORD</Password>
    <OBSRequest Validity="00020000"
      Flags="0">
      <Ticket Type="Mobile"
        OBSService=""
        Service=" SERVICECODE"
        SubService=""
        ChargeAddr="27613177895"
        Description=""
        Value="100"/>
      <Subscr Started="2014-11-27 12:15:52 STOP"
        Category="C1OBSTest"
        Trigger=""/>
    </OBSRequest>
  </Request>
</Message>
```

9.5 HTTP Response

Example: HTTP POST Response from Higate

XML Type: -

```
<Response status_code='0' token='#%#TOK_I1JZjwwLjAuMC4zMTkwPg=='>
  <Data name='msg_generic_rsp'>
    <field name='msg_no' value='4' />
    <field name='seq_no' value='1504089' />
  </Data>
</Response>
```

9.6 Generic Response

Example: Generic Success Response to Higate

XML Type: -

```
<Response status='0'/>
```

9.7 SMS MT – Callback XML

Example: HTTP POST Call back for SMS Requests

XML Type: OnResult

```
<?xml version="1.0" ?>
<Message>
  <Version Version="1.0"/>
  <Response Type="OnResult" TOC="SMS" RefNo="4" SeqNo="2289859312">
    <SystemID>Higate</SystemID>
    <UserID>USERNAME</UserID>
    <Service>SERVICECODE</Service>
    <NetworkID>2</NetworkID>
    <Network ID="2" MCC="655" MNC="010"/>
    <ErrCode>0</ErrCode>
    <ErrText>SMPP Submit Error</ErrText>
    <OnResult
      Flags="0"
      Code="6"
      SubCode="0"
      Text="SMPP Submit Error"/>
  </Response>
</Message>
```

9.8 OBS Request – Call back XML

Example: HTTP POST Callback for OBS Requests (Vodacom)

XML Type: OnOBSResponse

```
<?xml version="1.0" ?>
<Message>
  <Version Version="1.0"/>
  <Response Type="OnOBSResponse" RefNo="123456" SeqNo="2289859310">
    <SystemID>Higate</SystemID>
    <UserID>USERNAME</UserID>
    <Service>SERVICECODE</Service>
    <NetworkID>1</NetworkID>
    <Network ID="1" MCC="655" MNC="010"/>
    <Flags>0</Flags>
    <ResultCode>9</ResultCode>
    <ResultText>Pending</ResultText>
    <ErrCode>0</ErrCode>
    <ErrText></ErrText>
    <OnOBSResponse Type="XML">
      <OBS><Action>CONFIRMED</Action><Result>0</Result><ResultText>Success</ResultText><Param>
        <BillingCode></BillingCode>
        <AdultRating>0</AdultRating>
        <Category>OBSPRODUCTNAME</Category>
        <Descr></Descr>
        <ItemID></ItemID>
        <RxSeqNo>46243614</RxSeqNo>
        <Other>
          <Vodacom>
            <Subscr>
              <Started>2014-07-29 14:54:13</Started>
            </Subscr>
            <Product Name= ProductName ' ID='2762' BillingFreq='Day' ServiceID='INT02762' Activation='' />
          </Vodacom>
        </Other>
      </Param>
      <Subscr Category= 'OBSPRODUCTNAME' Started='2014-07-29 14:54:13' />
    </OBS>
  </OnOBSResponse>
</Response>
```

Example: HTTP POST Call back for OBS Requests (MTN)

XML Type: OnOBSResponse

```
<?xml version="1.0" ?>
<Message>
  <Version Version="1.0"/>
  <Response Type="OnOBSResponse" RefNo="3" SeqNo="2289859310">
    <SystemID>Higate</SystemID>
    <UserID>USERNAME</UserID>
    <Service>SERVICECODE</Service>
    <NetworkID>2</NetworkID>
    <Network ID="2" MCC="655" MNC="010"/>
    <Flags>0</Flags>
    <ResultCode>9</ResultCode>
    <ResultText>Pending</ResultText>
    <ErrCode>0</ErrCode>
    <ErrText></ErrText>
    <OnOBSResponse Type="XML">
      <OBS><Action>CONFIRMED</Action><Result>260</Result><ResultText>Success</ResultText><Param>
<BillingCode></BillingCode>
<AdultRating>0</AdultRating>
<Category>ProductName</Category>
  <Descr></Descr>
  <ItemID></ItemID>
  <RxSeqNo>46243725</RxSeqNo>
  <Other>
    <MTN>
      <ContentID></ContentID>
      <Started>2013-08-14</Started>
      <Value>250</Value>
      <ServiceInterval>Daily</ServiceInterval>
      <ContentTypeID>023</ContentTypeID>
      <ProductID>2762</ProductID>
      <Description>Product Description</Description>
      <MaxBillAmmount>500</MaxBillAmmount>
      <ContentToken>13835456343301309744</ContentToken>
      <Action>DEBIT</Action>
      </MTN>
      </Other>
    </Param>
    <Subscr Category= 'ProductName' Started='2013-08-14 00:00:00' />
  </OBS>
</OnOBSResponse>
</Response>
</Message>
```

Example: HTTP POST Call back for OBS Requests (CellC)

XML Type: OnOBSResponse

```
<?xml version="1.0" ?>
<Message>
  <Version Version="1.0"/>
  <Response Type="OnOBSResponse" RefNo="3" SeqNo="2289859310">
    <SystemID>Higate</SystemID>
    <UserID>USERNAME</UserID>
    <Service>SERVICECODE</Service>
    <NetworkID>3</NetworkID>
    <Network ID="3" MCC="655" MNC="010"/>
    <Flags>0</Flags>
    <ResultCode>9</ResultCode>
    <ResultText>Pending</ResultText>
    <ErrCode>0</ErrCode>
    <ErrText></ErrText>
    <OnOBSResponse Type="XML">
      <OBS><Action>CONFIRMED</Action><Result>260</Result><ResultText>Success</ResultText><Param>
    <BillingCode></BillingCode>
    <AdultRating>0</AdultRating>
    <Category>ProductName</Category>
    <Descr></Descr>
    <ItemID></ItemID>
    <RxSeqNo>0</RxSeqNo>
    <Other>
      <CellC>
        <ProviderID>INTEG</ProviderID>
        <ChargeCode>INTEG012</ChargeCode>
        <ContentID></ContentID>
        <Product Name='MobyApps plus Whatsapp' ID='2931' BillingFreq='Daily' ServiceID='330737862' Activation='2014-11-13' /></CellC>
      </Other>
    </Param>
    <Subscr Backbill=" Category= 'ProductName ' Started='2014-11-13 12:01:25' Trigger='SMSMO:19555629' />
  </OBS>
</OnOBSResponse>
</Response>
</Message>
```

Example: HTTP POST Call back for OBS Requests (Telkom Mobile)

XML Type: OnOBSResponse

```
<?xml version="1.0" ?>
<Message>
  <Version Version="1.0"/>
  <Response Type="OnOBSResponse" RefNo="3" SeqNo="2289859310">
    <SystemID>Higate</SystemID>
    <UserID>USERNAME</UserID>
    <Service>SERVICECODE</Service>
    <NetworkID>15</NetworkID>
    <Network ID="15" MCC="655" MNC="010"/>
    <Flags>0</Flags>
    <ResultCode>9</ResultCode>
    <ResultText>Pending</ResultText>
    <ErrCode>0</ErrCode>
    <ErrText></ErrText>
    <OnOBSResponse Type="XML">
      <OBS><Action>CONFIRMED</Action><Result>260</Result><ResultText>Success</ResultText><Param>
<BillingCode></BillingCode>
<AdultRating>0</AdultRating>
<Category> ProductName</Category>
      <Descr></Descr>
      <ItemID></ItemID>
      <RxSeqNo>0</RxSeqNo>
      <Other>
        <TelkomMobile>
          <ProviderID></ProviderID>
          <ContentID></ContentID>
          <Product Name='MobyApps plus Whatsapp by repl' ID='2931' BillingFreq='RecurringDaily' ServiceID='OI2014112500374023' Value='600'
</TelkomMobile>
        </Other>
      </Param>
      <Subscr Backbill=" Category='1278 Mobigames SC 43089' Started='2014-11-25 12:02:11' Trigger='SMSMO:19659606' />
    </OBS>
  </OnOBSResponse>
</Response>
</Message>
```