



XSIT2 HTTP Connector

User's Guide Version 2.1

Prepared by SIT Mobile

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INTRODUCTION

This document describes the method with which clients communicate with the XSIT2 HTTP messaging platform gateway in order to send MT push messages. This document also explains about ESME applications that they need to develop in order to send messages and receive delivery reports from XSIT2.

XSIT2 HTTP gateway support HTTP GET and HTTP POST method to accept messages from clients.

For communicating with the XSIT2 HTTP, client has to have a valid account with SIT Mobile.

QUICK START

Account setup:

Before processing messages from any sender, XSIT2 HTTP gateway validates the sender based on 4 parameters.

Sl. No	Field	Description
1	login	Login name assigned by SITMobile
2	password	Password assigned by SITMobile
3	clientID	Client ID assigned by SITMobile
4	accountID	Account ID assigned by SITMobile

*If you do not have any of the above details, please contact SIT Mobile Support.



Sending a message:

To start messaging, other than the above four parameters, XSIT2 HTTP gateway need few more parameters. List of parameters XSIT2 HTTP gateway accepts are listed below:

Sl. No	Field	Description
1	login	Login name assigned by SITMobile
2	password	Password assigned by SITMobile
3	clientID	Client ID assigned by SITMobile
4	accountID	Account ID assigned by SITMobile
5	seq	Sequence number which client needs to send with each request. Should be unique for each message.
6	text	Actual message to be sent
7	destination	Destination MSISDN.
8	source	Source MSISDN
9	wapurl	The URL for WAP push
10	mclass	The message class.
11	data	Binary data
12	udh	UDH value for Binary message

Among those listed above 'login', 'password', 'clientID', 'accountID', 'destination' and 'seq' are mandatory. And either 'text' or 'data' field should be there. If 'source' is missing, XSIT2 will add its own source and process the message.

Destination should not contain any special character. For example, a number in UK will take the form 441122112211.

Submission request with text or data length more than standard short message length will be



spitted into multiple parts. The response send back to the client will contain message ids of each part.

Domain to connect to the HTTP gateway: <http://httpgateway.sitmobile.com>

(The application URL may change. Please contact SIT Mobile support in case of any difficulty)

Format: Sending a single message:

```
http://<domain>/HTTPConnector/SendMessage?login=<YourLogin>&password=<YourPasswo  
rd>&clientID=<YourClientID>&accountID=<YourAccountID>&destination=<DestinationNumber  
>&text=<YourMessage>&seq=<Unique sequence ID>&source=<Source>
```

Example: Sending a single message:

```
http://<domain>/HTTPConnector/SendMessage?login=user&password=password&clientID=120  
0&accountID=92719&destination=2309988776611&text=hello&seq=123&source=admin
```

When the HTTP Gateway receives an MT push request, it responds with a unique message identifier, sequence number, status and the response message. This can be kept by the client for their reference. If the message is more than 160 characters XSIT2 HTTP gateway will split the message into multiple parts and each part will get a message id. The response send back to the client for these messages will contain multiple lines with the messageid corresponding for each part.

Response Format:

For a normal standard SMS with text less than 160 characters, response send will be of the following format.

```
<RESP CONC='false'>
```

```
<SEQ='1' MID='1720260' STA='OK'>
```



</RESP>

If the destination field contains more than one MSISDN, the response will be:

```
<RESP CONC='false'>  
<SEQ='1' MID='1720260' STA='OK'>  
<SEQ='1' MID='1720261' STA='OK'>  
</RESP>
```

For a message with more than 160 character length, the message will be sliced into multiple parts by the gateway and the response will contain message id for each part.

```
<RESP CONC='true'>  
<SEQ='1' MID='1720246' SLICE='0' STA='OK'>  
<SEQ='1' MID='1720247' SLICE='1' STA='OK'>  
</RESP>
```

If the message is binary, the splitting happens at 120 bytes to accommodate the UDH. And the behavior is same as that of a normal text message explained above.

RESP: response indicator

CONC: Specify the concatenation status. CONC="true" means message submitted was a long message.



Details of the fields are as listed in the table.

Sl. No	Field	Description
1	SEQ	Sequence number of the message sent by the client.
2	MID	Unique message identifier generated by HTTP Gateway.
3	STA	Status of the message. OK means it is accepted.
4	SLICE	Slice id for a concatenated SMS
5	RES	The result of the message submission.

Example:

STA field will be any of the listed values.

Value	Description	Comment
OK	The message is accepted	This message will get a message identifier.
INV_DST	Destination is invalid	Message will not get a message id.
CREDIT_OUT	Client has gone out of credits during a live sending. For further sending, client has to recharge their account.	Message will not get a message id.



XSIT2 HTTP Gateway supports single MT message push through HTTP GET and POST methods. It is always recommended to use HTTP POST.

BULK MESSAGE

XSIT2 HTTP Gateway supports bulk message. Client can submit a bulk message request with a single push request. Destination numbers can be specified as CSV with the request.

Format for bulk push:

```
http://<domain>/SendMessage?login=YourLogin&password=YourPassword&clientID=YourClientID&accountID=YourAccountID&seq=SeqNumber&destination=comma-separated-destination-MSISDN&text=Test+message&source=SourceAddress
```

Example:

```
http://<domain>/HTTPConnector/SendMessage?login=user&password=pass&clientID=900&accountID=1719&destination=944799xxxx,944644xxxx,989900xxxx,980961xxxx&text=hello&seq=1234567890&source=10929787890
```

Response Format:

Once bulk push is made to HTTP gateway, it responds with a unique message identifier for each message. The sequence number would be the same for all the messages. The response format is the same as it is for single MT message push.

Example:

The response from HTTP Gateway for the bulk push made above would take the following format:



```
<RESP CONC='false'>  
<SEQ='1234567890' MID='11222334343' STA='OK' />  
< SEQ='1234567890' MID='11222335341' STA='OK' />  
<SEQ='1234567890' MID='11222345341' STA='OK' />  
</RESP>
```

The order of message identifier in the response corresponds to the order of destination MSISDNs in the bulk message request. That is, message identifier '11222334343' corresponds to MSISDN 944799xxxx, 11222335341 to 944644xxxx and so on.

XSIT2 HTTP Gateway supports bulk message sending through HTTP GET and POST methods. But the number of destination MSISDNs that can be included in the GET request is limited to the one supported by the client's user-agent.

WAP PUSH MESSAGE

WAP Push, has been incorporated into the specification to allow WAP content to be pushed to the mobile handset with minimum user intervention. A WAP Push is basically a specially encoded message which includes a link to some URL. WAP Push is specified on top of WDP (WAP Datagram Protocol, resembled the UDP protocol in the Internet); as such, it can be delivered over any WDP-supported bearer, such as GPRS or SMS.

XSIT2 HTTP Gateway supports WAP push(SI) message. Client can send a WAP Push request by sending a wapurl with the request.

The format of WAP Push request:



`http://<domain>/SendMessage?login=YourLogin&password=YourPassword&clientID=YourClientID&accountID=YourAccountID&seq=SeqNumber&destination=comma-separated-destination-MSISDN&text=Test+message&source=SourceAddress&wapurl=someURL`

Examples for sending wap message with http and https wapurl:

`http://<domain>/HTTPConnector/SendMessage?login=user&password=pass&clientID=900&accountID=1719&destination=944799xxxx,944644xxxx,989900xxxx,980961xxxx&text=WelcomeSIT&seq=1234567890&source=10929787890&wapurl=http://sitmobile.com`

`http://<domain>/HTTPConnector/SendMessage?login=user&password=pass&clientID=900&accountID=1719&destination=944799xxxx,944644xxxx,989900xxxx,980961xxxx&text=securegoogle&seq=1234567890&source=10929787890&wapurl=https://encrypted.google.com`

If the client requires WAP push for any destination, the client should contact their respective account manager who will verify their account routing.

FLASH MESSAGE

A flash SMS appears directly on the handset screen instead of the inbox. It is a useful alternative to normal SMS when you want to catch the attention of user immediately. Recipient has the option of saving the message in their inbox or discarding it.

Format: flash SMS:

`http://<domain>/SendMessage?login=YourLogin&password=YourPassword&clientID=YourClientID&accountID=YourAccountID&seq=SeqNumber&destination=comma-separated-`



destination-MSISDN&text=Test+message&source=SourceAddress&mclass=0

Example:

http://<domain>/HTTPConnector/SendMessage?login=user&password=pass&clientID=900&accountID=1719&destination=944799xxxx,944644xxxx,989900xxxx,980961xxxx&text=WelcomeSIT&seq=1234567890&source=10929787890&mclass=0

BINARY MESSAGE

To send binary sms through XSIT2 HTTP gateway, the message has to be in hexadecimal format. Necessary UDH parameters also should be set with the message. For sending binary message, the message should be with data parameter and XSIT2 will discard value contained in text field. Also it should have an extra field for setting the UDH parameter. A long binary message will be split into multiple parts by the HTTP gateway and response will contain message id of each parts.

Format: binary SMS:

http://<domain>/SendMessage?login=YourLogin&password=YourPassword&clientID=YourClientId&accountID=YourAccountId&seq=SeqNumber&destination=comma-separated-destination-MSISDN&source=SourceAddress&data=0FAA0B12FF&udh=050403158a158a

Example:

http://<domain>/HTTPConnector/SendMessage?login=user&password=pass&clientID=900&accountID=1719&destination=944799xxxx,944644xxxx,989900xxxx,980961xxxx&seq=1234567890&source=10929787890&data=0FAA0B12FF&udh=050403158a158a



ARABIC MESSAGE

To send Arabic message through XSIT2 HTTP gateway, it needs a parameter ccode which specify the character code of the text. The value of ccode should be UCS2 for Arabic message. Format of an Arabic message is exactly same as a normal text message but slicing happens if the message length is more than 70 characters. The form has to be in UTF-8 encoded format.

Format: Arabic SMS:

`http://<domain>/SendMessage?login=YourLogin&password=YourPassword&clientID=YourClientId&accountID=YourAccountID&seq=SeqNumber&destination=comma-separateddestination-MSISDN&source=SourceAddress&text= مرحبا ران جي ٿ &ccode=UCS2`

Example:

`http://<domain>/HTTPConnector/SendMessage?login=user&password=pass&clientID=900&accountID=1719&destination=944799xxxx,944644xxxx,989900xxxx,980961xxxx&seq=1234567890&source=10929787890& text= مرحبا ران جي ٿ &ccode=UCS2`

POST BACK URL CONFIGURATION

XSIT2 HTTP Gateway allows clients to receive the Delivery Reports for the MT message sending. This would require the client to register their post back URL with the XSIT2 HTTP Gateway. Please contact the XSIT2 support team for configuring the post back URL. In order to receive the delivery report for the messages, the client needs to setup an HTTP server application listening on the post back URL specified.



XSIT2 gateway tries to dispatch the delivery report as and when it is received. In case server application at the client side is not running, no retry attempts are made for redelivery of the Delivery Report. But the client can contact the XSIT2 support team to know the status of previously made MT pushes.

Format of Delivery Report:

The Delivery Report pushed by XSIT2 HTTP Gateway to the post back URL would contain the following parameters:

Sl. No	Parameter	Description
1	Status	Status value returned by the operator in Delivery Report followed by the subscribed error code(Both are separated with a colon).
2	Time	Time of delivery.
3	MessageID	Same as the message id that was send when request was made
4	Destination	The destination MSISDN

The status value present in Delivery Report follows SMPP version 3.4 protocol specifications. Please refer SMPP Protocol version 3.4 Appendix B to know more about the possible error codes.



Sample script for accepting Delivery Report:

```
package com.sitmobile;

import java.io.IOException;
import java.util.HashMap;
import java.util.Map;
import javax.servlet.RequestDispatcher;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

public class DRHandler extends HttpServlet{

private static final long serialVersionUID = 1L;

public void doGet(HttpServletRequest req, HttpServletResponse resp)throws
ServletException, IOException
{
    System.out.println("Getting content from SITMobile...");
    Map reqMap = req.getParameterMap() ;

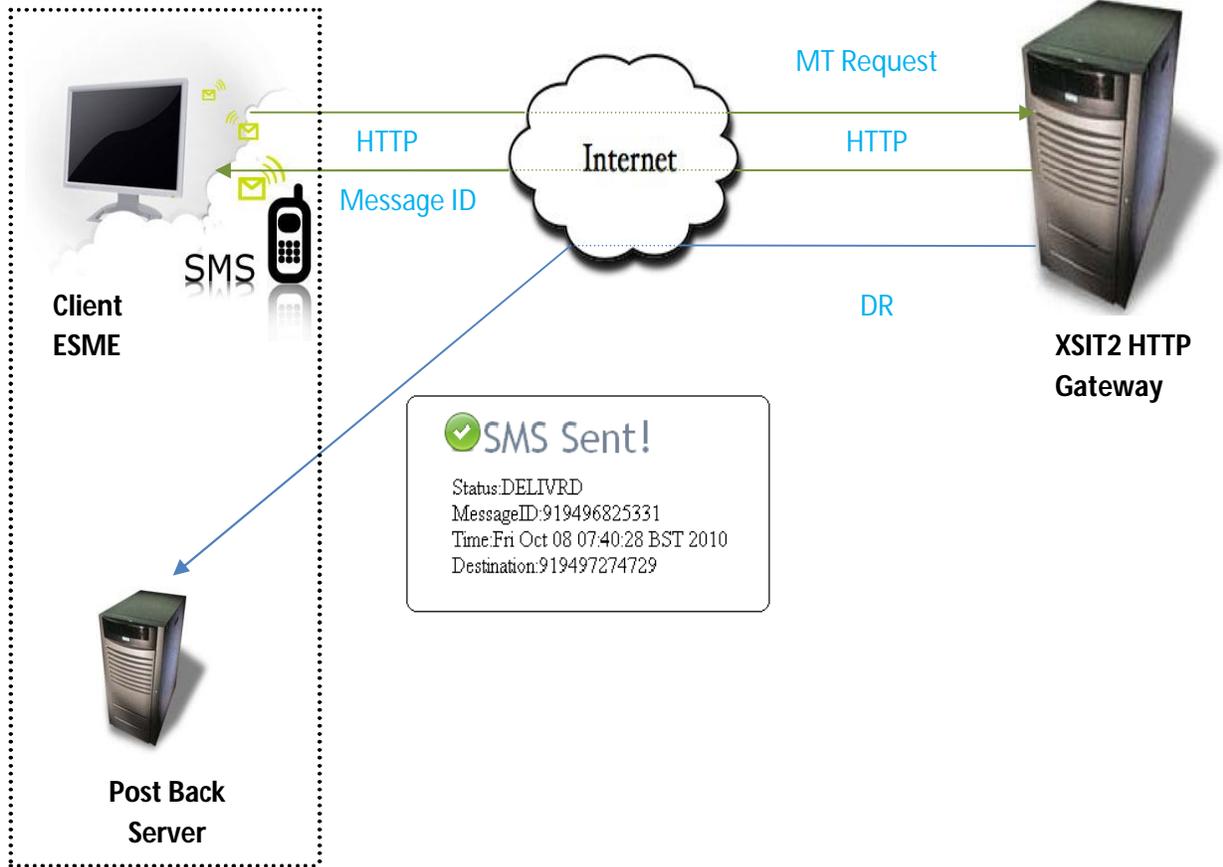
    if(reqMap.containsKey("Status"))
    {
        System.out.println("STATUS:"+reqMap.get("Status"));
    }
    if(reqMap.containsKey("Time"))
    {
        System.out.println("TIME:"+reqMap.get("Time"));
    }
    if(reqMap.containsKey("MessageID"))
    {
        System.out.println("MessageID:"+reqMap.get("MessageID"));
    }
    if(reqMap.containsKey("Destination"))
    {
        System.out.println("Destination:"+reqMap.get("Destination"));
    }
}
}
```



GENERIC ARCHITECTURE

The messaging system allows the client to send SMS and receive Delivery Reports. This requires a client application which can send messages to XSIT2 HTTP Gateway. The communication between this gateway and the client uses http protocol in both directions. XSIT2 has a page (Servlet) where the clients can submit their MT messages. XSIT2 will return a message id with the sequence number client sent. This message id can be used by clients for their reference.

Optionally client can also subscribe for delivery report, which will be sent to the client once the operator delivers the message. The clients need to register their post back URL with HTTP XSIT2 Gateway if they opt to receive the delivery report. The clients also have to setup an application listening at the post back URL that accepts some variable parameters from either HTTP GET or HTTP POST request. We have provided a sample code for accepting the values send by XSIT2 HTTP Gateway.





ERROR MESSAGES

XSIT2 HTTP Gateway provides user readable error messages for invalid http push requests. The following table describes the error messages.

Sl. No	Error message	Description
1	Required parameter cannot be null	Sequence number of the message sent by the client.
2	Please check your credential	When client authentication fails.
3	Please check your balance	When client goes out of credits
4	Message Sending is not allowed during blackout period	When client sending messages during black out time (Time period at which SMS sending is banned), messages will be restricted in case the client is enabled this feature.
5	Message length exceeded, Received Message length : YYY Maximum Length Allowed : XXX	Client is sending the message and if the message length is more than the allowed character limit for any message type, it will send this error message to the client



GLOSSARY

XSIT2 HTTP Gateway: A gateway which accepts HTTP messages from another system and use SIT SMPP gateway to process the message. HTTP gateway acts as an intermediate between a sender and XSIT2, allowing them to share information by communicating between protocols common to them.

MT Message: A message is sent from an originator to a mobile where the message is either received, or, if the recipient device is unavailable, stored for later delivery. A delivery report or failure report is then sent back to the SC. These messages may be input to the Service center by other mobile users (via a mobile originated short message) or by a variety of other sources.

Bulk Message: Bulk Message is a mobile messaging service that allows companies to send high or low volumes of SMS quickly and efficiently to a list of destinations.

Delivery report: Delivery report is generated for each individual message. These provide details relating to the delivery status of the message in the operator network.