MTN OCEP

HTTP SMS

API

www.mtnmessaging.com

Version 1.2

We recognise how much easier it is to get things done with your suppliers and partners if you know who to talk to. If you have any queries or would like additional information, please contact:

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Contents

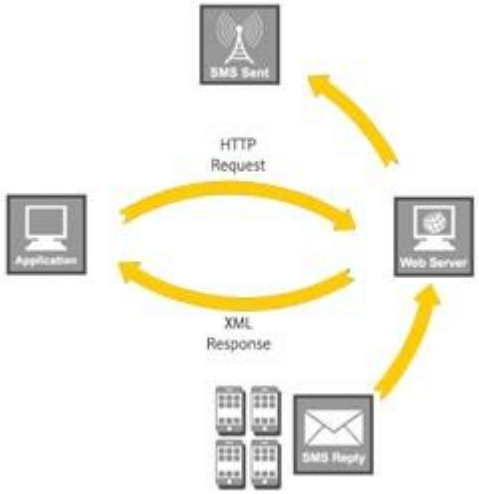
Version history

Revision number	Revision Date	Author	Changes
1.0	2021-09-12	Jon Hudson	Initial document release
1.1	2021-12-02	Natasha Meyer	REST API method added
1.2	2022-07-21	Jon Hudson	Updated Links

Introduction

This document provides instructions on how to integrate MTN Messaging SMS services into various solutions by using the HTTP SMS API. Use the HTTP SMS API for sending SMS messages, collecting delivery reports, and receiving incoming SMSs from mobiles.

All API communication should be done over HTTPS protocol to minimize security risks.



Base URL Endpoints

https://sms01.umsg.co.za

Supported Methods

- Standard HTTP GET – for smaller batches or single sends.
- Standard HTTP POST – preferable for larger batches.
- REST

Authentication

There are two different methods for authenticating with the SMS Gateway. On success, the response header HTTP status code will be `200 OK` with the response body in XML format. If an attempt to call the SMS gateway without authorization is performed, you will receive an error `401 Unauthorized`.

Basic Authentication

The header is constructed as follows:

- Username and password are combined into a string: `username:password`
- That string is then encoded to Base64 format
- Authorization method and space is put before the encoded string: `"Basic "`

:: Example

String to encode: 'username:password'

Encoded string: 'dXNlcm5hbWU6cGFzc3dvcmQ='

Authorization header: 'Basic dXNlcm5hbWU6cGFzc3dvcmQ='

Query String Parameters

:: Definition

https://sms01.umsg.co.za/

:: Query String Parameters

username:	string Your account username
password:	string Your account password

URL Encoding

Be sure to percent-encode reserved characters in your message text as described here:
https://en.wikipedia.org/wiki/Percent-encoding

Send SMS

Single Message [GET]

This method allows you to send a single text message to one destination address.

:: Data Length Restrictions

The GET Method is limited to a URL length of 2048 characters.

:: Definition

https://sms01.umsg.co.za/xml/send/?

:: Query String Parameters

number:	string message destination address
message:	string Text of the message that will be sent
userrref:	string Unique user reference (Optional)

:: Example

https://sms01.umsg.co.za/xml/send?number=27721234567&message=Message%20Text&userref=12345

:: Result Example (Success)

```
<?xml version="1.0"?>
<sms>
  <submitresult action="T" key="U" result="V" number="X" error="Y" userrref="Z" />
</sms>
```

:: SubmitResult attributes

action:	string The result of what the SMS gateway did with the message. Valid values: - enqueued - not queued – Error code
key:	string

	The reference assigned to the message in the sent logs. This can be used to track and monitor the status.
result:	int Value indicating success (1) or failure (0)
number:	string Destination Number
error:	int The error attribute is only present if result is 0. Refer to the error codes section for definitions.
userrref:	string Returns userref value supplied in submit.

Multiple Message [GET]

This method allows you to send multiple text messages to one or more destination addresses.

:: Data Length Restrictions

The GET Method is limited to a URL length of 2048 characters.

:: Definition

https://sms01.umsg.co.za/xml/send/?

:: Query String Parameters

number[i]:	string message destination address
message[i]:	string Text of the message that will be sent

Each Text Message will have its own number and message parameters, ending with an incrementing number.

:: Example

https://sms01.umsg.co.za/xml/send/?number1=27721234567&message1=Message%20Text&number2=27821234567&message2=Message%20Text

:: Result Example

```
<?xml version="1.0"?>
<sms>
  <submitresult action="V1" key="X1" result="Y1" number="Z1" />
  <submitresult action="V2" key="X2" result="Y2" number="Z2" />
</sms>
```

:: SubmitResult attributes

action:	string The result of what the SMS gateway did with the message. Valid values: - enqueued - not queued – Error Code
key:	string

	The reference assigned to the message in the sent logs. This can be used to track and monitor the status.
result:	int Value indicating success (1) or failure (0)
number:	string Destination Number
error:	int The error attribute is only present if result is 0. Refer to the error codes section for definitions.

Multiple Message [POST]

This method allows you to send multiple text messages to one or more destination addresses. It is most suited for large batches, but you are able to send single SMSs as well.

:: Data Length Restrictions

POST data is limited to 10MB.

:: Definition

https://sms01.umsg.co.za/xml/send/?

:: Payload Parameters

username:	string Your account username
password:	string Your account password
batchcols:	string Column format for the data held in the batch parameter, comma separated. Options: - number [required] - message [required] - userref [optional]
batch:	string Your batch data formatted as above. Columns are comma separated, and messages line-break separated.

:: Example

URL

https://sms01.umsg.co.za/xml/send/?

Payload

username:	myUsername
password:	myPassword
batchcols:	number,message
batch:	27721234567%2CHi+there%0D%0A2782123456 7%2CHi+there%0D%0A27831234567%2C+Hi+there

:: Result Example

```
<?xml version="1.0"?>
<sms>
  <submitresult action="enqueued" key="11111111" result="1" number="27721234567" />
  <submitresult action="enqueued" key="11111112" result="1" number="27821234567" />
  <submitresult action="enqueued" key="11111113" result="1" number="27831234567" />
</sms>
```

REST API

REST API can be used to send a message to one or multiple recipients. JSON (application/json) is the content type of both requests and responses. Requests with invalid JSON will be rejected. All API communication should be done over HTTPS protocol to minimize security risks.

:: Definition

https://sms01.umsg.co.za/send/sms/?

:: Request Parameters

Property	Type	Description
to	array_string	An array of destination numbers. If you want to send to one destination, a single string is supported instead of an array.
message	string	Message text
ems	Boolean	Enables EMS
userref	string	A unique reference of your choice [optional]

:: Request examples

Single destination:

JSON

```
POST /send/sms HTTP/1.1
Host: http://sms01.umsg.co.za
Authorization: Basic dXNlcm5hbWU6cGFzc3dvcmQ=
Content-Type: application/json
Accept: application/json
{
   "to":"27721234567",
   "message":"This is a text message",
   "ems":"0",
   "userref": "myuniquereference"
}
```

Multiple destinations:

JSON

```
POST /send/sms HTTP/1.1
Host: http://sms01.umsg.co.za
Authorization: Basic dXNlcm5hbWU6cGFzc3dvcmQ=
Content-Type: application/json
Accept: application/json
{
   "to": [
        "27721234567",
        “27821234567”
        ],
   "message":"This is a text message",
   "ems":"0"
}
```

:: Response Parameters

Property	Type	Description
Action	string	Result of what they SMS gateway did with the message. Either “enqueued” or “not enqueued”.
Key	string	The reference assigned to the message in the sent logs.
Result	int	A value indicating success (1) or failure (0)
Number	string	Destination Number
Error	int	The error parameter is zero unless the result is zero. Refer to the error codes section for definitions.

:: Response Examples

Single destination:

200 OK


```
{
   "Action":"enqueued",
   "Key":"xxx.yyyyyyyy",
   "Result":"1",
   "Number":"27721234567",
   "Error":"0"
}
```


Multiple destinations:

This also applies to an EMS message to one destination, as they are delivered in separate parts.

200 OK


```
[
 {
    "Action":"enqueued",
    "Key":"xxx.yyyyyyyy",
    "Result":"1",
    "Number":"27721234567",
    "Error":"0"
 },
 {
    "Action":"enqueued",
    "Key":"xxx.yyyyyyyy",
    "Result":"1",
    "Number":"27821234567",
    "Error":"0"
 }
]
```

EMS

The maximum length for an SMS is 160 characters. Exceeding that will result in the message being segmented and charged accordingly if the EMS parameter is used. If the message length is exceeded and the EMS parameter is not used, the message will be truncated to 160 characters.

While the networks do support up to 2000 characters, we recommend keeping it to 1000 or less. Every segment of an EMS will be billed as an SMS. For example, one EMS message that consists of two segments will be billed as two SMSs.

To enable EMS, you just have to append the EMS flag to the query-string in any of the sending methods.

:: Query String Parameters

ems:	int Set to 1 to enable, 0 to disable. Leaving out the ems parameter altogether is the same as setting it to 0.

:: Examples

GET
https://sms01.umsg.co.za/send/?number=+27721234567&message=Long+message+text&ems=1

The result formats and attributes associated with them are the same as those in the Multiple Message [GET] section.

POST
https://sms01.umsg.co.za/send/?ems=1

Phone Number Format

It's suggested that you follow the E.164 number formatting standard:

- All numbers are standardized to a 15-digit maximum length
- Numbers are prefixed with a +, followed by country code, network code, and subscriber number

Numbers that aren't formatted this way may work. More information on this standard can be found here: https://en.wikipedia.org/wiki/E.164

Supported Characters

To fit in with most providers, we use the GSM 03.38-character set. The visible characters in the extension table are supported but note that an extra character is required for escaping. More information on the character set is available here: https://en.wikipedia.org/wiki/GSM_03.38

Duplicate Checking

Our system attempts to block duplicate SMSs from being sent within a 15-minute rolling window. Due to the complexities involved, it is not guaranteed, and understand that the onus is on you to ensure that no duplicates are submitted to the SMS gateway.

Error Codes

If the response from the gateway has a SubmitResult element with the action attribute set to "not queued", the error code attribute will be one of the following values:

Code	Definition
150	Invalid username or password.
152	Sending SMS disabled on Gateway account.
153	Not enough credits to send SMS.
154	Attempted to submit an invalid number (format or banned).
155	Duplicate message submitted within the last 15 minutes.
156	There is no routing available for the destination number, which is usually due to an invalid number being submitted.
157	Gateway DNS not found.
159	Invalid path.
160	Problem communicating with Gateway.
161	Invalid query string.
162	Number in WASPA "Do Not Contact" (DNC) List

It is best to base logic on the error code accordingly. For example, resubmitting a message when the previous SubmitResult element action status was "not queued" due to not enough credits will not solve the problem.

Reporting

Delivery Receipts

We support HTTP Call-backs for delivery report data, which forwards you the receipt information to a URL you have provided

HTTP Call-backs

To receive delivery reports via call-back, you need to have a URL on your web server setup that can receive GET requests from us. Call-backs are only available on Administrator accounts.

:: Setup

Enabling the call-back functionality is setup through the HTTP SMS API Configuration menu on the portal.

:: Query String Parameters

All you need is a web page which accepts the following query string parameters:

FN:	int From number The cell number sent to
TN:	int To number The number that the message was sent from
SC:	int Success Two possible values: - 1: success - 0: failed
ST:	string SMSC Status
RF:	string Reference number for the SMS, which is the same as the key.
TS:	datetime Date and time the message was received

Incoming Messages (Replies)

We support HTTP Call-backs for incoming message data, when we receive the MO message we will forward the information to a URL you have provided

HTTP Call-backs

To receive incoming messages via call-back, you need to have a URL on your web server setup that can receive GET requests from us. Call-backs are only available on Administrator accounts.

:: Setup

Enabling the call-back functionality is setup through the HTTP SMS API Configuration menu on the portal.

:: Query String Parameters

All you need is a web page which accepts the following query string parameters:

FN:	int From number The number that sent the message
TN:	int To number The number that the message was sent to
MS:	string The message text
TS:	datetime Date and time the message was received

HTTP Call-back retry cycle

If your URL is unavailable for any reason, call-back attempts will be retried once per hour, up to 3 days.

SMSC Status Codes

Below are the most common status codes returned by the SMSC. Any SMSC Status errors returned that are not mentioned in this list can be queried with Support for further investigation.

Code	Definition	Description	Action
0	Delivered	No Error	None
1	Enroute	SMS submitted to Operator	None
3	Expired	Mobile number off/unavailable and delivery retry expired on SMSC	Query with subscriber
4	Deleted by SMSC	Delivery to mobile device not allowed.	Subscriber to query Operator
5	Cannot Deliver	Destination device not available on network. Ported/Cancelled SIM	Query with subscriber
7	Cannot Deliver	Phone is off / GSM Network error / Phone out of range / SIM card full	Query with subscriber
8	Delivery Failure	Destination SIM Full or SMS receiving turned off on phone	Query with subscriber
11	Abandoned	Invalid Destination Address	Fix destination mobile number
25	Abandoned	Invalid Destination Address	Fix destination mobile number
69	submit_sm failure	Maximum Delivery Number Exceeded	Reduce traffic to mobile number/Submit SMS later
116	Unknown SCP Error	Suspended subscriber account	Query with subscriber
120	VAS Unavailable to Called Party	Barred subscriber/Blacklisted	Query with subscriber
123	Reserved Error	Unknown failure	Contact Support Desk
124	submit_sm failure	Maximum Delivery Number Exceeded	Reduce traffic to mobile number/Submit SMS later
134	Reserved Error	Unknown failure	Contact Support Desk
195	Missing OPT Param	Missing Optional Parameter	Contact Support Desk
196	Invalid OPT Param	Invalid Optional Parameter	Contact Support Desk
254	Delivery Failure	Failure on subscriber end	Query with subscriber
1036	Called Party Not Existent or Incorrect State	Cancelled SIM/Porting not updated	Query with subscriber
1037	Called Party Not Existent or Incorrect State	Cancelled SIM/Porting not updated	Query with subscriber
1038	VAS Unavailable to Called Party	Barred subscriber/Blacklisted	Query with subscriber
1039	Insufficient Balance of Calling Party	Suspended subscriber account	Query with subscriber
1042	submit_sm failure	Maximum Delivery Number Exceeded	Reduce traffic to mobile number/Submit SMS later
NULL	DLR Pending	Awaiting DLR status from SMSC	None

Receipts may take up to 72 hours to reflect accurately.


Thank you!
everywhere you go
MTN