



Tilil Technologies

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Quick SMS API Guide

Preamble

This document provides a quick step by step guide on how to send bulk and premium messages using an application interface (API). It has been made simple to enable a quick integration into our bulk messaging services. A more descriptive guide can be found at <http://tililtech.com>.

To note is that Tilil Technologies is always developing its systems to suit every client's needs and also to achieve the best data integrity as possible.

We also customize the APIs to every client's request. So, if you need SOAP, XML, Direct database insertion or the bulk messaging system installed in your datacenter or in your intranet talk to us.

SECTION 1: BULK MESSAGING

SMS API Endpoints:

(New): <https://api.tililtech.com/sms/v3/sendsms>

Sending a message:

Below is a sample *sendsms* JSON data:

```
{
  "api_key": "{{Test API Key}}",
  "service_id": 0,
  "mobile": "0708400000",
  "response_type": "json",
  "shortcode": "Tilil",
  "message": "This is a message.\n\nRegards\nTilil"
}
```

Where:

Variable	Type	Description	Example
api_key	String	The authentication string provided to the customer	qw566wqtwgqyw65wq
shortcode	String	The origination alphanumeric or numeric code	Tilil
message	String	The message our system should send to the end user. The message can be up to 920 characters long	Click on the following link to download your content
mobile	String	The customer mobile number to receive the message. This can be any format e.g. 708400000, 0708400000, +254 708 400000	0708400000
service_id	Int	An identifier of the service allocated to the customer. This is always 0 for bulk messaging	0
response_type	String	This is either <i>plain</i> or <i>json</i> . This only applies in the old messaging platform.	json

SMS Response(s):

1. Success

```
[
  {
    "status_code": "1000",
    "status_desc": "Success",
    "message_id": 288369252,
    "mobile_number": "254708400000",
    "network_id": "1",
    "message_cost": 1,
    "credit_balance": 148
  }
]
```

2. Failed

```
[
  {
    "status_code": "1003",
    "status_desc": "Invalid mobile number",
    "message_id": "0",
    "mobile_number": "123",
    "network_id": "",
    "message_cost": "",
    "credit_balance": ""
  }
]
```

Where:

Variable	Description
status_code	The numeric status code to help in API integrations. Please refer to the next table for a description of our status codes.
status_desc	A short description of the status code
message_id	A unique identifier of every message that is successfully accepted
mobile_number	A well formatted recipient mobile number
network_id	The network identifier of the recipient mobile number
message_cost	The amount that is deducted from your account for this particular message
credit_balance	The balance remaining in you account after the request

API Status codes and descriptions

status_code	Status Description (status_desc)
0	Unknown error
0	Unknown error
1000	Success
1	Success
1001	Invalid sender name { \$senderValue }
1002	Network not allowed
1003	Invalid mobile number
1004	Low bulk credits
1005	Failed. System error
1006	Invalid credentials
1007	Database connection failed
1008	Database selection failed
1009	No dlr
1009	unsupported data type
1010	unsupported request type
1011	Invalid user state

Getting delivery reports:

1. Offline (Pulling – Not recommended)

This is a pull method where a client requests for a delivery report from the system by specifying a *message id* in the request. The URL below will return a delivery report for *message id 288369252*

https://api.tililtech.com/sms/v3/getdlr?api_key=<API_KEY>&messageId=288369252

Table 004: Get delivery report request URL

Where **288369252** is the *message_id* returned in *sendsms* request.

You only expect:

(1). 1009;No dlr

(2). 288369252;Success;1;DeliveredToTerminal;2020-05-13 08:47:03;00:00:06

Where:

Value	Name	Description
288369252	Message Id	Used when querying delivery reports
Success	Request Status	A status description for a successful request
1	Delivery Status	This can be used by developers for easy indexing of delivery statuses
DeliveredToTerminal	Delivery Description	Full description of the delivery status.
2020-05-13 08:47:03	Delivery Date/Time	When the message was actually delivered to the end user
00:00:06	TAT	The <i>turn around time</i> . From when a messages was scheduled up to the time it was delivered to the end user.

2. Online (Recommended)

This is the recommended method of getting delivery reports. A partner specifies a delivery reports callback URL from the portal. All delivery reports sent through an API will be pushed to the URL automatically. Below is a PHP sample that can be hosted by the client to receive delivery report notifications. Note that the client has to implement the Business Logic for example:

- Updating a local sent message
- Storing the delivery report for later processing
- Generate a report or an *alert* for support monitoring

```
<?php
$data_json = file_get_contents('php://input');
$data_array = json_decode($data_json);
if (!$data_array) {
    die("0:error;unsupported data type");
}

$messageId = $data_array->messageId;
$dldrTime = $data_array->dldrTime;
$dldrStatus = $data_array->dldrStatus;
$dldrDesc = $data_array->dldrDesc;
$stat = $data_array->tat;
$network = $data_array->network;

//YOUR BUSINESS LOGIC

//END YOUR LOGIC: if all goes well echo 'OK' otherwise echo 'FAILED' for the system to retry

echo "OK;$messageId;$dldrDesc;$network";
?>
```

Delivery codes and descriptions:

Code	Delivery Message	General Status	Description
1	DeliveredToTerminal	Delivered	Message delivered to the end user's device
2	MessageWaiting	Queued	Message forwarded to the operator but there is no delivery report
3	DeliveryImpossible	Failed	The mobile operator is not able to deliver the message due to system errors. Rarely occurs
4	DeliveryNotificationNotSupported	Delivered	Message delivered to the end user's device on test bed environment
5	DeliveredToNetwork	NoReport	Message forwarded to the operator but there is no delivery report
6	DeliveryUncertain	NoReport	Message forwarded to the operator but there is no delivery report after 24 hours
7	Insufficient_Balance	Failed	Message delivery failed because of insufficient balance
8	Invalid_Linkid	Failed	An on-demand message delivery failed because of an expired or invalid link id
9	TeleserviceNotProvisioned	Failed	End user device cannot receive GSM messages
10	UserInBlacklist	Failed	End user has requested the mobile operator to stop all messages from the sender id to their number
11	UserAbnormalState	Failed	Subscriber mobile number may be blocked
12	UserIsSuspended	Failed	Subscriber mobile number suspended due to fraud etc
13	NotSFCUser	Failed	End user not subscribed to a service
14	UserNotSubscribed	Failed	End user not subscribed to a service
15	UserNotExist	Failed	Subscriber does not belong to the mobile operator
16	AbsentSubscriber	Failed	Subscriber is out of network for over 24 hours since a message was sent
17	NOT_DELIVERED	Failed	Same as DeliveryImpossible
18	DELIVERED	Delivered	Message delivered to the end user's device
19	ForwardedToNetwork	NoReport	Message forwarded to the operator but there is no delivery report
20	MessagePaused	Queued	Message paused by system user
21	MessageRejected	Failed	End user has opted out of message from a sender id
22	Queued	Queued	Message has not been processed
23	InvalidMobile	Failed	(not set)
24	ReportNotHandled	Failed	(not set)
25	SenderName Blacklisted	Failed	The customer has opted out through *456*20#
26	MessagePurged	Purged	Message Purged by System User simply means the message was deleted.

Purchasing Credit

1) Mobile Money (Online)

You can purchase credits from any mobile number through MPESA Paybill Number **566518**;

Account Tilil.<**YOUR_ACCOUNT_NUMBER**> e.g **Tilil.B211**

Your account will be credited automatically.

2) Cheque (Offline)

You can draw a cheque to Tilil Technologies Limited. Credits will be loaded to your account pending cheque processing.

SECTION 2: SHORT CODE MESSAGING

1. Receiving inbound messages

The client will provide an endpoint that accepts the following JSON data through a POST request. In cases where a client wants the data pushed over a secure connection such as over SSL, the client will provide the necessary certificates to be configured in our application.

```
{
  "api_token": "944a73412bed1240b5a2afa381a928a6",
  "message": "Test inbox",
  "shortcode": "70700",
  "mobile": "254726770792",
  "inbox_id": "4448236",
  "service_id": "32",
  "network_name": "Safaricom",
  "timestamp": "20180217065028",
  "link_id": "763723672367236526261"
}
```

Where:

Variable	Type	Description	Example
api_token	String	The token supplied by a partner for our service request authentication purposes. This can be an encrypted value of their username, server IP, timestamp and password.	944a73412bed1240b5a2afa381a928a6
timestamp	String	Timestamp in the format YmdHis to be used in password decryption.	20180217065028
mobile	String	The user mobile number that should receive the payment. All mobile numbers are validated before a request is accepted.	254726770792
message	String	The message as received from the end user.	Test inbox
shortcode	String	The short code associated with the service	70700
inbox_id	Int	A unique identifier of the message	4448236
service_id	Int	The service identifier for the service	34
network_name	String	A network identifier e.g Safaricom, Airtel, Yu, Equitel & Telkom	Safaricom
link_id	String	Received for On-Demand shortcode messages. This should be used when sending out replies.	326372781291728126767

On successful reception of an inbound message, the client should reply (echo back) with the following JSON string:

```
{
  "result_code": 1,
  "result_desc": "OK",
  "result_message": "Thank you for your message."
}
```

Where:

Variable	Type	Description	Example
request_code	Int	This is a status of the pushed message: 1 – Success; 0 – Failed. A message might fail to be received on the client’s side due to internal server errors etc.	1 or 0
request_desc	String	This is a brief description of the request. OK for successful reception; FAILED for a failed request	OK or FAILED
result_message	String	This is a message our system should send back to the end user. Leave this empty to process a user request and reply back later through the <i>sendSms</i> API.	Thank you for your message

2. Sending short code messages

This is the same as sending a bulk message. The only difference is that a **service_id** will be added to this request. See example JSON below:

```
{
  "api_key": "1ts3bK2QVbr7caV9211b28kf0dd3kfIP95eb5bvEjAPScd12of1Pm7C2mGOLQca4",
  "sender_name": "22915",
  "mobile": "0708400000",
  "message": "This is a message from Tilil",
  "service_id": "44",
  "link_id": ""
}
```

Where:

Variable	Type	Description	Example
api_key	Int	The authentication string provided to the customer	qw566wqtwgqyw65wq
sender_name	String	The origination alphanumeric or numeric code	22915
message	String	The message our system should send to the end user. The message can be up to 920 characters long	Click on the following link to download your content
mobile	String	Mobile number to receive the MT message	0708400000
service_id	Int	An identifier of the service allocated to the customer	44
link_id	Long	Used for On-Demand messages. Leave empty for subscription services	12345678987654321

This data is posted to the following endpoint:

sendSms endpoint: <https://api.tililsms.com/sms/v3/sendsms>

Success response packet:

```
{
  "status_code": "1000",
  "status_desc": "Success",
  "message_id": "sms.5ed0e9e9619937.17151728",
  "mobile_number": "254708400000",
  "network_name": "Safaricom",
  "message_cost": "1",
  "credit_balance": "-1"
}
```

Failed response packet:

```
{
  "status_code": "1003",
  "status_desc": "Invalid mobile number 26770792",
  "message_id": "0",
  "mobile_number": "0",
  "network_name": "Not set",
  "message_cost": "0.00",
  "credit_balance": ""
}
```

3. Receiving (un)Subscription Requests

The client will register an endpoint with us that accepts JSON post requests. See a request sample below:

```
{
  "api_token": "23627367236232ghgge23g22gh2gh2",
  "network_name": "Safaricom",
  "shortcode": "22915",
  "service_id": "44",
  "mobile": "254708400000",
  "update_type": "activation",
  "keyword": "GAME",
  "subscriber_ref": "12345",
  "timestamp": "20200528124756"
}
```

Where:

Variable	Type	Description	Example
api_token	String	The token supplied by a partner for our service request authentication purposes. This can be an encrypted value of their username, server IP, timestamp and password.	2tyy23ty43y434hj3h43u4u3u4u
timestamp	String	Timestamp in the format YmdHis that shows when the customer subscribed or unsubscribed	20200528124756
mobile	String	The user mobile number that should receive the payment. All mobile numbers are validated before a request is accepted.	254708400000
update_type	String	This indicates the customer request: activation for a customer subscribing and deactivation for a customer unsubscribing	activation or deactivation
shortcode	String	The short code associated with the service	22915
keyword	String	The exact keyword a user used when subscribing to the service	GAME
subscriber_ref	Int	A unique identifier of the customer in our services	12345
service_id	Int	The service identifier for the service	44
network_name	String	A network of the customer e.g Safaricom, Airtel, Yu, Equitel & Telkom	Safaricom

On successful reception of the (un)subscription request, the client should reply (echo back) with the following JSON string:

```
{
  "result_code": 1,
  "result_desc": "OK",
  "result_message": "Thank you for subscribing to our service."
}
```

Where:

Variable	Type	Description	Example
request_code	Int	This is a status of the request to enable our system mark it as done: 1 – Success; 0 – Failed. A Failed request will be retried automatically after 3 minutes 3 times	1 or 0
request_desc	String	This is a brief description of the request. OK for successful reception; FAILED for a failed request	OK or FAILED
result_message	String	This is a message our system should send back to the customer. Leave this empty to process a user request and reply back later through the <i>sendSms</i> API.	Thank you for subscribing to our service

4. (un)Subscription API

This service is invoked by a client to activate or deactivate a customer on a certain service.

Endpoint: <https://api.tililms.com/sms/v3/subscribermanage>

Activation request packet:

```
{
  "api_key": "1ts3bK2QVbr7caV9211b28kf0dd3kfIP95eb5bvEjAPScd12of1Pm7C2mGOLQca4",
  "service_id": "44",
  "mobile": "254708400000",
  "option": "activation"
}
```

Deactivation request packet:

```
{
  "api_key": "1ts3bK2QVbr7caV9211b28kf0dd3kfIP95eb5bvEjAPScd12of1Pm7C2mGOLQca4",
  "service_id": "44",
  "mobile": "254708400000",
  "option": "deactivation"
}
```

In both cases, you will receive the following responses:

```
{
  "status_code": "1",
  "status_desc": "Success",
  "mobile": "254708400000",
  "network_name": "Safaricom"
}
```

Where:

Variable	Type	Description	Example
status_code	Int	This is a status of your: 1 – Success; anything else is Failed with a short description.	1, 0 or 1009
status_desc	String	This is a brief description of the request. Success for all successful requests; Failed for failed request. Failed requests have a brief description.	>Success >Failed – user locked >Failed – user exists
mobile	String	The reformatted mobile number of the customer	254708400000
network_name	String	The detected network of the customer	Safaricom Airtel Telkom Equitel