SUNWIRE

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Sunwire SMS Messaging API

for Application Providers using JSON/HTTP

Revision 3.1

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Sunwire SMS Messaging API (SMS/JSON)

This document outlines the messaging interface for application providers for the purposes of sending and receiving SMS short and long code messages.

The SMS/JSON interface allows messages to be received from a mobile user (Mobile Originated, or MO) and messages to be sent to a mobile user (Mobile Terminated, or MT).

Short Code Keyword Requirements

The Canadian Wireless Telecommunications Association (CWTA) mandates that certain keywords be available with all short code services, to ensure that the consumer and carriers can obtain necessary information about the service:

INFO – English or English/French service information (who runs the service, how can they be contacted, who is the aggregator, etc.)

HELP / AIDE – English / French help messages (where can more information or help be found, contest rules & regulations, contact info, etc.)

STOP / ARRET – English / French opt-out request

The application should process incoming text from the mobile phone in a case insensitive way (i.e. treat STOP, Stop and stop as identical requests).

Mobile Originating Messages (MO)

Mobile Originated (MO) messages are messages sent to a short code or long code by a mobile user via SMS and the application will process the MO message. In an interactive program, the MO message is usually followed with an MT reply to the user. This reply can be sent at a later time with an MT transaction originated by the application provider. For short code it can be sent with the MO confirmation in the transaction originated by Sunwire.

The application provider will provide a URL for a collection agent that can receive JSON over HTTP as content-type application/json and reply with a JSON response.

MO requests will come from the same addresses as your destination for MT messages (see below).

The Request will contain the following attributes:

Type	'Message' – Indicates the type of request
ID	Unique identifier of the message
From	The sender of the message (Note: The phone number format may vary from carrier to carrier. It will either be a 10 (national) or 11 (international) digit number
To	Short code or long code receiving the message
Body	The contents of the message (UTF-8 encoded)
Key	*Optional: When configured, a key will be provided in the request to authenticate with your application.*

The Response will contain the following attributes:

Status	'OK' to mark the message as received. Remove it from queue. 'FAIL' to mark the message as received but rejected. Remove it from queue.
Body	**This is an optional field and will only work on short codes.** You may include a message in the Body attribute to immediately respond (must be UTF-8 encoded). *NOTE: For cross-carrier programs, the reply should be limited to less than 137 characters (1-136) due to carrier restrictions on message size. This limit includes spaces, carriage returns, etc.*

An HTTP error, empty response or status other than 'OK' or 'FAIL' will be treated as a delivery failure and the message will not be removed from the queue. Delivery failures will be re-attempted at exponentially increasing intervals, re-trying after 2 seconds, then 4, 8, 16, etc… up to a total of 12 re-tries (or approximately 2.5 hours of attempts), after which the message will be marked as failed and removed from the queue.

Example MO

Request

```
{
    "Type": "Message",
    "ID": "57cf806f02571",
    "From": "17055551234",
    "To": "123456",
    "Body": "Subscribe"
}
```

Response (Confirm Only)

```
{
    "Status": "OK"
}
```

Response (Confirm with Reply)

```
{
    "Status": "OK",
    "Body": "Thank you for subscribing."
}
```

Mobile Terminated Messages (MT)

Mobile Terminated (MT) messages are used to send messages from an application to a user via SMS.

The application provider will provide a delivery agent that can send JSON over HTTP as content-type application/json.

The JSON document must be posted to the API URL as the contents of the HTTP POST, i.e. the HTTP POST will deliver the document as content-type application/json and not as an embedded file inside an encoded form. This means that the delivery agent will need to access the HTTP POST content directly instead of using encoded form methods or tools for encoding name-value pairs.

API URLs: Specific URL(s) will be provided as part of your configuration, but they will follow the format: https://xxx.sunwire.ca/sms/

The application provider must provide Sunwire with a list of IP addresses that will require access to this API before it can be used.

The Request will contain the following attributes:

From	The sender of the message. Numeric value of the long code or short code that will be sending.
To	Numeric value of the recipient of the message
Body	The contents of the message (must be UTF-8 encoded). *NOTE: For cross-carrier programs, the reply should be limited to less than 137 characters (1-136) due to carrier restrictions on message size. This limit includes spaces, carriage returns, etc.*
Receipt	Supported on short codes only. Value must be 'YES' or 'NO' to request delivery receipt (See Delivery Receipt Report section for more information)
Key	*Optional: If configured, an API key will be required in the request for authentication purposes.*

The Response will contain the following attributes:

Status	'OK' or 'FAIL'
Reason	Reason for fail status (Only if status is FAIL)
ID	Unique identifier of the message (Only if status is OK)

Example MT

Request

```
POST /sms HTTP/1.1
Content-Type: application/json
Content-Length: 112

{
    "From": "123456",
    "To": "17055551234",
    "Body": "Your daily news.",
    "Receipt": "yes”
}
```

Response (Fail)

```
{
    "Status": "Fail",
    "Reason": "IP address not allowed."
}
```

Response (Success)

```
{
    "Status": "OK",
    "ID": "67df965509094"
}
```

Delivery Receipt Report

Mobile Terminated (MT) short code messages can request delivery status information. When a message is delivered (see MT section), either successfully or unsuccessfully, the destination carrier will generate a delivery receipt to be returned to the application provider.

Support for delivery receipts varies by wireless carrier. Delivery receipts may take up to 3 days to be returned since the default delivery retry window is 3 days when a subscribers phone is off or out-of-range.

Delivery receipts are sent to the same URL as MO messages except the 'Type' attribute will be 'Report' instead of 'Message'. Optionally, a separate URL can be configured for receiving Delivery Receipts.

The Request will contain the following attributes:

Type	'Report' – Indicates the type of request
ID	The original unique identifier of the message
From	The original sender of the message
To	The original recipient of the message
Status	Indicates the final status of the message. The value is numeric and may be one of: 0 - DELIVERED - The message has been delivered. 1 - EXPIRED - The message could not be delivered. 2 - DELETED - The message has been deleted. 3 – IN-TRANSIT – The message is in-transit (intermediate status). 5 - UNDELIVERABLE / FAILED - The message could not be delivered. 7 - UNKNOWN - The status of the message is unknown.
Reason	Indicates the reason the message has reached this status.

The Response will contain the following attributes:

Status	Status should be set to 'OK' to mark the report as received to it from the queue.

An HTTP error will result in the report being left in the queue and retried at a later time until considered expired and deleted from the queue. The expiry time is carrier specific.

Example Report

Request	Response

{
"Type": "Report",
"ID": "67df965509094",
"From": "123456",
"To": "17055551234",
"Status": "0",
"Reason": "SM received by SME"
}
	{
	"Status": "OK"
	}

Usage Report

The usage report API function returns usage summary and details for requested period (up to a maximum of 45 days per query).

The JSON document must be posted to the API URL as the contents of the HTTP POST, i.e. the HTTP POST will deliver the document as content-type application/json and not as an embedded file inside an encoded form. This means that the delivery agent will need to access the HTTP POST content directly instead of using encoded form methods or tools for encoding name-value pairs.

The Request will contain the following attributes:

FromDate	Specify the starting date for the report (Formatted as "YYYY-MM-DD")
ToDate	Specify the end date for the report (Formatted as "YYYY-MM-DD")
Details	'YES' or 'NO' – Request details on individual messages

The Response will contain the following attributes:

Status	'OK' or 'FAIL'
Summary	Provides a message summary Attributes: **Total** – Total number of message segments during period **Sent** – Total number of sent message segments during period **Received** – Total number of received message segments during period **CarrierLookups** – (short code only) Total number of carrier lookups performed during period
Records	Details on individual records when Details requested Attributes: **ID** – Transaction ID **GUID** – Globally Unique ID **CustID** – Customer ID **DateTime** –Date and time of transaction (Formatted as "YYYY-MM-DD HH:MM-SS") **From** – Originating number **To** – Terminating number **Direction** – Direction of message **Length** – Length of message in bytes **Segments** – Number of SMS segments in message **CarrierLookup** – (short code only) Message required carrier lookup (0 = No, 1 = Yes) **Status** – Status of the message **OK** – Message successful **FAIL** – Message failed **N/A** – Unknown error

Example Usage Report Request

Request

```
POST /sms/report HTTP/1.1
Content-Type: application/json
Content-Length: 90

{
    "FromDate": "2016-11-01",
    "ToDate": "2016-11-30",
    "Details": "yes"
}
```

Response (Success)

```
{
    "Status": "OK",
    "Summary": {
        "Total": 2,
        "Sent": 1,
        "Received": 1,
        "CarrierLookups": 1
    },
    "Records": [
        {
            "ID": "681",
            "GUID": "60367129d2207",
            "CustID": "1",
            "DateTime": "2016-11-02
16:45:54",
            "From": "12345",
            "To": "17055554444",
            "Direction": "send",
            "Length": 16,
            "Segments": "1",
            "Status": "OK",
            "CarrierLookup": "1"
        },
        {
            "ID": "691",
            "GUID": "1F53D9E3",
            "CustID": "1",
            "DateTime": "2016-11-02
17:08:45",
            "From": "17055554444",
            "To": "12345",
            "Direction": "recv",
            "Length": 5,
            "Segments": "1",
            "Status": "OK",
            "CarrierLookup": "0"
        }
    ]
}
```

Revision History

Rev 3.1 – July 24, 2024

- Added MO delivery failure re-try details to coincide with SolSwitch version 3.4.0.
- Created Revision history section.

Rev 3.0 – July 10, 2024

- Updated styling and information to align with the introduction of SolSwitch version 3.