



REST API TECHNICAL SPECIFICATION

Version 3.0

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1: Introduction

This document describes the interface for the Cosmic SMS Gateway and how to connect to our messaging platform to send Mobile Terminated SMS messages to UK and International mobile numbers.

The main features provided with the Cosmic SMS API are as follows:

- Send SMS messages up to 612 characters long.
- Get the latest account balance in real time.

The Technical Specification has been designed to provide developers with a detailed description of the functionality available via the Cosmic API's; the submission parameters and valid data values, request and response examples and character encoding regimes. However, if any queries arise then please contact Cosmic SMS Customer Support –

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Email: support@clicksms.co.uk

1.1 Version History

Version No.	Date	Description
1.0	1 st August 2014	Release version
1.1	4 th August 2014	Added message scheduling option
1.2	9 th August 2014	Added long SMS option
2.0	9 th September 2015	API endpoint moves to 'api.cosmicsms.com'
2.1	25 th June 2016	Add template functionality to Send SMS API
2.2	17 th July 2016	Updated error response status Id's to new format
3.0	17 th August 2018	Add Get Balance API

2: Connectivity

This section describes the basics required to make use of the Cosmic API's.

2.1 Authentication

All Web API requests must be authenticated using [Basic Access authentication](#). The account username and API password are concatenated with a colon ':' separator to produce an authentication string. For example, if your user name is 'Geoffrey' and your password is 'AbC123DeF456', then your authentication string is: Geoffrey:AbC123DeF456

This authentication string is required to be Base64 encoded. Online tools are available to help, one example can be found at <https://www.base64encode.org/>. The encoded authentication string is then added to the HTTP header for all API requests. In the example below the encoded authentication string is shown in red.

```
POST * HTTP/1.1
From: www.myserver.co.uk
Host: api.cosmicsms.com
Authorization: Basic R2VvZmZyZXk6QWJDMTIzRGVGNDU2
Content-Type: application/xml
Content-Length: 247
```

2.2 HTTP Request Status Codes

Status	Message
200 OK	The request has succeeded.
201 Created	The request has been fulfilled and resulted in a new resource being created.
400 Bad Request	The request could not be understood by the server due to malformed syntax.
401 Unauthorized	The request requires user authentication.
402 Payment Required	The request could not be processed due to insufficient funds.
404 Not Found	The server has not found anything matching the Request-URI.
405 Method Not Allowed	The method specified in the Request-Line is not allowed for the resource identified by the Request-URI.
415 Unsupported Media Type	The server is refusing to service the request because the entity of the request is in a format not supported by the requested resource for the requested method.
5xx Server error	Server error – contact Cosmic Support at support@cosmicsms.com

The error message will also contain an error code and a human-readable description with more details about why the request has failed.

Name	Description	Example
statusid	The unique API status code to identify the error.	INVALID_USER
statustext	A short descriptive message about the error that occurred.	Error: Invalid username/password combination

Example

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<error>
  <statusid>INVALID_USER</statusid>
  <statustext>Error: Invalid username/password combination</statustext>
</error>
```

2.3 Datetime

All date/times in the API are represented using [ISO-8601](#).

e.g. 2014-11-05T13:15:30Z

3: Sending SMS Messages

Send SMS messages using our HTTP REST API. Message can be sent immediately or scheduled for future sending to one or more mobile numbers.

Send SMS requests must use the POST method, the message body is using [XML](#) to represent available resources and uses *application/xml* for requests & responses.

SMS messages up to 160 characters use a single SMS credit. Messages can be up to a maximum length of 612 characters (4 x 153 characters). For long SMS messages, each 153 characters message segment uses 1 SMS credit. The decrease in message length parts (to 153 characters from 160) for long SMS messages is because each message part contains extra information that the receiving handset uses to reconstruct the message parts in the correct order and display as a single message.

3.1 Send SMS – Request

REST endpoint: <https://api.cosmicsms.com/prod/rest/sms/send>

Example:

POST * HTTP/1.1

From: www.myserver.co.uk

Host: api.cosmicsms.com

Authorization: Basic R2VvZmZyZXk6QWJDMTlzRGVGNDU2

Content-Type: application/xml

Content-Length: 247

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<sendsms>
  <message>test message</message>
  <template>1234</template>
  <params>
    <name>Phil</name>
    <url>https://www.myserver.com/profile/phil</url>
  </params>
  <mobiles>
    <mobile>07123456701</mobile>
    <mobile>07123456702</mobile>
  </mobiles>
  <sender>447711456000</sender>
  <receipturl>https://www.myserver.com/receipt</receipturl>
  <sendtime>2014-11-05T13:15:30Z</sendtime>
</sendsms>
```

3.1.1 HTTP Header Values

Name	Description	Example
POST	The Send SMS request uses the HTTP POST method.	POST * HTTP/1.1
Authorization	Basic authentication is used to pass the username and password in the HTTP header (see section 2: Authentication for more details).	Authorization: Basic R2VvZmZyZXk6QWJDMTlzRGVGNDU2
Content-Type	The message body uses XML .	Content-Type: application/xml

3.1.2 XML Request Values

Name	Description	Example
xml	The XML header specifies the version and character-encoding of the message. The character-encoding must be set to 'ISO-8859-1'.	<?xml version="1.0" encoding="ISO-8859-1" ?>
message (ignored if template is set)	SMS Message text. SMS messages up to 160 characters use a single SMS credit. Messages can be up to a maximum length of 612 characters (4 x 153 characters). For long SMS messages, each 153 characters message segment uses 1 SMS credit.	This is a short message
template (optional)	SMS Template Id Set the template Id instead of sending message text. Contact Cosmic support to set up a template.	1234
params (optional)	List of parameters. Parameters are used with templates to enable dynamic content. The parameter name is set in the tag <>	<param1>1234</param1>
mobile	Target mobile phone number – mobile numbers are listed within the '<mobiles>' tag. Remove the '+' sign and any leading zeros when using international codes. A UK number can start with '07' or '447'.	07123456701 447123456701 491700015555
sender	The name shown on the recipient mobile handset as the sender of the message. The sender can be set to a name or a mobile phone number – for inbound SMS the sender must be set to a mobile phone number. Numeric – max length 15, Alphanumeric – max length 11 [a-z] [A-Z] [0-9] _-, no spaces.	CosmicSMS 447711456000
receipturl (optional)	Set this value to the URL of your web-server if you wish to receive delivery receipts.	https://www.myserver.com/receipt

sendtime (optional)	Set the date and time to send the message, if this is not included or is set in the past, then the message will be sent immediately. Format ISO-8601 (YYYY-MM-DDThh:mmZ)	2014-11-05T13:15:30Z
------------------------	---	----------------------

3.2 Send SMS – Response

Example:

HTTP/1.1 200 OK
 Server: CosmicSMS
 Content-Type: application/xml
 Content-Length: 362

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<sendsms>
  <batch>20154010</batch>
  <mobilestatus>
    <mobile>447123456701</mobile>
    <statusid>SUCCESS</statusid>
    <statustext>Success: Message submitted successfully</statustext>
  </mobilestatus>
  <mobilestatus>
    <mobile>447123456702</mobile>
    <statusid>SUCCESS</statusid>
    <statustext>Success: Message submitted successfully</statustext>
  </mobilestatus>
</sendsms>
```

3.2.1 XML Response Values

Name	Description	Example
batch	Unique id set by Cosmic SMS.	156243
mobilestatus	Container element for the response status elements 'mobile', 'status id', and 'status text'.	<mobilestatus> <mobile/> <statusid/> <statustext/> </mobilestatus>
mobile	The submitted mobile number (international format).	447123456701
statusid	The status of the submitted message. Status SUCCESS = Message submitted successfully. See below for full list of submission status codes returned and descriptions.	SUCCESS
statustext	The status description text.	Message submitted successfully

3.2.2 Response Status Values

Status ID	Status Text
SUCCESS	Success: Message submitted successfully
INVALID_REQUEST	Error: Invalid or badly formatted request
INVALID_VALUES	Error: Missing or badly formatted request value(s)
INVALID_USER	Error: Invalid username/password combination
INSUFFICIENT_CREDIT	Error: Insufficient credit
SYSTEM_ERROR	Error: System error
INVALID_MPNS	Error: No valid mobile numbers supplied
MAX_MPNS_EXCEEDED	Error: Too many mobile numbers supplied (Max: 500)
INVALID_MESSAGE_LENGTH	Error: Message length too long, max length 612 characters
INVALID_DELIVERY_DATE	Error: Invalid date/time for scheduled delivery
INVALID_MPN	Error: Invalid or badly formatted mobile number
INVALID_SENDER	Error: Invalid sender id. Max length: 11, [a-z] [A-Z] [0-9], no spaces
INVALID_RECEIPT_URL	Error: Invalid or badly formatted URL reply path
INVALID_TEMPLATE	Error: Invalid template
INVALID_PARAMS	Error: Invalid parameters

3.3 Send SMS Example

Here is an example of how to send a message using [Curl](#) -

```
curl -k https://api.cosmicsms.com/prod/rest/sms/send -X POST -H "Authorization: Basic R2VvZmZyZXk6QWJDMTlzRGVGNU2" -d @cosmicsms_send.xml
```

The file 'cosmicsms_send.xml' contains the following example code –

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<sendsms>
  <sender>447711456000</sender>
  <message>test message</message>
  <mobiles>
    <mobile>07123456701</mobile>
    <mobile>07123456702</mobile>
  </mobiles>
</sendsms>
```

(the above example will return '401 Unauthorised' as the Authorization header value needs to be replaced with valid authentication credentials)

4: Get Balance

Get the current account balance using our HTTP REST API.

Get Balance requests must use the GET method, the balance is returned in the response body in *application/xml* .

4.1 Get Balance – Request

REST endpoint: <https://api.cosmicsms.com/prod/rest/account/balance>

Example:

GET * HTTP/1.1

From: www.myserver.co.uk

Host: api.cosmicsms.com

Authorization: Basic R2VvZmZyZXk6QWJDMTlzRGVGNU2

4.1.1 HTTP Header Values

Name	Description	Example
GET	The Get Balance request uses the HTTP GET method.	GET * HTTP/1.1
Authorization	Basic authentication is used to pass the username and password in the HTTP header (see section 2: Authentication for more details).	Authorization: Basic R2VvZmZyZXk6QWJDMTlzRGVGNU2

4.1.2 XML Request Values

Not required

4.2 Get Balance – Response

Example:

HTTP/1.1 200 OK

Server: CosmicSMS

Content-Type: application/xml

Content-Length: 118

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<getbalance>
  <balance>25.88</balance>
  <currency>GBP</currency>
</getbalance>
```

4.2.1 XML Response Values

Name	Description	Example
balance	Current balance	25.88
currency	Currency of the balance Note: currently only GBP is supported	GBP (UK pounds) EUR (Euros)

4.2.2 Response Status Values

Status ID	Status Text
SUCCESS	Success: Message submitted successfully
INVALID_USER	Error: Invalid username/password combination
SYSTEM_ERROR	Error: System error

4.3 Get Balance Example

Here is an example of how to get the balance using [Curl](#) -
curl -k https://api.cosmicsms.com/prod/rest/account/balance -X GET -H "Authorization: Basic R2VvZmZyZXk6QWJDMTlzRGVGNDU2"

(the above example will return '401 Unauthorised' as the Authorization header value needs to be replaced with valid authentication credentials)

5: Character Sets and Encodings

Cosmic SMS supports the ISO-8859- (Latin1) character set with optional hex encoding. The actual characters delivered to the handset are product specific.

5.1 Special Characters

The following characters (literal or encoded) - part of the GSM Extended character set - use 2 characters in terms of the message length: [] { } \ ~ ^ | €

5.2 ISO-8859- (Latin1) Character Set

20	SP	SPACE	49	I	CAPITAL LETTER I
21	!	EXCLAMATION MARK	4A	J	CAPITAL LETTER J
22	"	QUOTATION MARK	4B	K	CAPITAL LETTER K
23	#	NUMBER SIGN	4C	L	CAPITAL LETTER L
24	\$	DOLLAR SIGN	4D	M	CAPITAL LETTER M
25	%	PERCENT SIGN	4E	N	CAPITAL LETTER N
26	&	AMPERSAND	4F	O	CAPITAL LETTER O
27	'	APOSTROPHE	50	P	CAPITAL LETTER P
28	(LEFT PARENTHESIS	51	Q	CAPITAL LETTER Q
29)	RIGHT PARENTHESIS	52	R	CAPITAL LETTER R
30	0	DIGIT ZERO	53	S	CAPITAL LETTER S
31	1	DIGIT ONE	54	T	CAPITAL LETTER T
32	2	DIGIT TWO	55	U	CAPITAL LETTER U
33	3	DIGIT THREE	56	V	CAPITAL LETTER V
34	4	DIGIT FOUR	57	W	CAPITAL LETTER W
35	5	DIGIT FIVE	58	X	CAPITAL LETTER X
36	6	DIGIT SIX	59	Y	CAPITAL LETTER Y
37	7	DIGIT SEVEN	5A	Z	CAPITAL LETTER Z
38	8	DIGIT EIGHT	5B	[LEFT SQUARE BRACKET
39	9	DIGIT NINE	5C	\	REVERSE SOLIDUS
40	@	COMMERCIAL AT	5D]	RIGHT SQUARE BRACKET
41	A	CAPITAL LETTER A	5E	^	CIRCUMFLEX ACCENT
42	B	CAPITAL LETTER B	5F	_	LOW LINE
43	C	CAPITAL LETTER C	60	`	GRAVE ACCENT
44	D	CAPITAL LETTER D	61	a	SMALL LETTER A
45	E	CAPITAL LETTER E	62	b	SMALL LETTER B
46	F	CAPITAL LETTER F	63	c	SMALL LETTER C
47	G	CAPITAL LETTER G	64	d	SMALL LETTER D
48	H	CAPITAL LETTER H	65	e	SMALL LETTER E

66	f	SMALL LETTER F
67	g	SMALL LETTER G
68	h	SMALL LETTER H
69	i	SMALL LETTER I
6A	j	SMALL LETTER J
6B	k	SMALL LETTER K
6C	l	SMALL LETTER L
6D	m	SMALL LETTER M
6E	n	SMALL LETTER N
6F	o	SMALL LETTER O
70	p	SMALL LETTER P
71	q	SMALL LETTER Q
72	r	SMALL LETTER R
73	s	SMALL LETTER S
74	t	SMALL LETTER T
75	u	SMALL LETTER U
76	v	SMALL LETTER V
77	w	SMALL LETTER W
78	x	SMALL LETTER X
79	y	SMALL LETTER Y
7A	z	SMALL LETTER Z
7B	{	LEFT CURLY BRACKET
7C	 	VERTICAL LINE
7D	}	RIGHT CURLY BRACKET
7E	~	TILDE
A0		NO-BREAK SPACE
A1	!	INVERTED EXCLAMATION
A2	¢	CENT SIGN
A3	£	POUND SIGN
A4	¤	CURRENCY SIGN
A5	¥	YEN SIGN
A6	‡	BROKEN BAR
A7	§	SECTION SIGN
A8	¨	DIAERESIS
A9	©	COPYRIGHT SIGN
AA	ª	FEMININE ORDINAL INDICATOR
AB	«	LEFT DOUBLE ANGLE QUOTATION
AC	¬	NOT SIGN
AD	-	SOFT HYPHEN
AE	®	REGISTERED SIGN
AF	—	MACRON
B0	°	DEGREE SIGN
B1	±	PLUS-MINUS SIGN
B2	²	SUPERSCRIP TWO
B3	³	SUPERSCRIP THREE
B4	´	ACUTE ACCENT
B5	µ	MICRO SIGN
B6	¶	PILCROW SIGN
B7	·	MIDDLE DOT
B8	¸	CEDILLA
B9	¹	SUPERSCRIP ONE
BA	º	MASCULINE ORDINAL INDICATOR
BB	»	RIGHT DOUBLE ANGLE QUOTATION
BC	¼	FRACTION ONE QUARTER
BD	½	FRACTION ONE HALF
BE	¾	FRACTION THREE QUARTERS
BF	¿	INVERTED QUESTION MARK
C0	À	CAPITAL LETTER A WITH GRAVE
C1	Á	CAPITAL LETTER A WITH ACUTE
C2	Â	CAPITAL LETTER A CIRCUMFLEX
C3	Ã	CAPITAL LETTER A WITH TILDE
C4	Ä	CAPITAL LETTER A WITH DIAERESIS
C5	Å	CAPITAL LETTER A RING ABOVE
C6	Æ	CAPITAL LETTER AE
C7	Ç	CAPITAL LETTER C WITH CEDILLA
C8	È	CAPITAL LETTER E WITH GRAVE
C9	É	CAPITAL LETTER E WITH ACUTE
CA	Ê	CAPITAL LETTER E CIRCUMFLEX
CB	Ë	CAPITAL LETTER E WITH DIAERESIS
CC	Ì	CAPITAL LETTER I WITH GRAVE
CD	Í	CAPITAL LETTER I WITH ACUTE
CE	Î	CAPITAL LETTER I CIRCUMFLEX
CF	Ï	CAPITAL LETTER I DIAERESIS
D0	Ð	CAPITAL LETTER ETH
D1	Ñ	CAPITAL LETTER N WITH TILDE
D2	Ò	CAPITAL LETTER O WITH GRAVE
D3	Ó	CAPITAL LETTER O WITH ACUTE
D4	Ô	CAPITAL LETTER O CIRCUMFLEX
D5	Õ	CAPITAL LETTER O WITH TILDE
D6	Ö	CAPITAL LETTER O DIAERESIS
D7	×	MULTIPLICATION SIGN
D8	Ø	CAPITAL LETTER O WITH STROKE
D9	Ù	CAPITAL LETTER U WITH GRAVE
DA	Ú	CAPITAL LETTER U WITH ACUTE

DB	Û	CAPITAL LETTER U CIRCUMFLEX	EE	î	SMALL LETTER I CIRCUMFLEX
DC	Ü	CAPITAL LETTER U DIAERESIS	EF	ï	SMALL LETTER I WITH DIAERESIS
DD	Ý	CAPITAL LETTER Y WITH ACUTE	F0	ð	SMALL LETTER ETH
DE	þ	CAPITAL LETTER THORN	F1	ñ	SMALL LETTER N WITH TILDE
DF	ß	SMALL LETTER SHARP S	F2	ò	SMALL LETTER O WITH GRAVE
E0	à	SMALL LETTER A WITH GRAVE	F3	ó	SMALL LETTER O WITH ACUTE
E1	á	SMALL LETTER A WITH ACUTE	F4	ô	SMALL LETTER O CIRCUMFLEX
E2	â	SMALL LETTER A CIRCUMFLEX	F5	õ	SMALL LETTER O WITH TILDE
E3	ã	SMALL LETTER A WITH TILDE	F6	ö	SMALL LETTER O DIAERESIS
E4	ä	SMALL LETTER A DIAERESIS	F7	÷	DIVISION SIGN
E5	å	SMALL LETTER A RING ABOVE	F8	ø	SMALL LETTER O WITH STROKE
E6	æ	SMALL LETTER AE	F9	ù	SMALL LETTER U WITH GRAVE
E7	ç	SMALL LETTER C WITH CEDILLA	FA	ú	SMALL LETTER U WITH ACUTE
E8	è	SMALL LETTER E WITH GRAVE	FB	û	SMALL LETTER U CIRCUMFLEX
E9	é	SMALL LETTER E WITH ACUTE	FC	ü	SMALL LETTER U DIAERESIS
EA	ê	SMALL LETTER E CIRCUMFLEX	FD	ý	SMALL LETTER Y WITH ACUTE
EB	ë	SMALL LETTER E DIAERESIS	FE	þ	SMALL LETTER THORN
EC	ì	SMALL LETTER I WITH GRAVE	FF	ÿ	SMALL LETTER Y DIAERESIS
ED	í	SMALL LETTER I WITH ACUTE	20AC	€	EURO SIGN