JSON API User Guide

Version: 1

Guidelines for Sending Messages

The following guidelines must be followed while using JSON API for sending the messages.

Receiver Phone Number

- For national and international messaging, the mobile number should be prefixed with the appropriate country code e.g. 91 in case of an Indian number.
- No special character like "-", "(",")" or anything similar is allowed in the phone number, e.g., 91-9812345678 is disallowed.

Character set support

- ValueFirst JSON API support sending messages in GSM Character set, and for Unicode using Unicode-16 Big-Ending and UTF-8 format.

Message Length

If a message is sent whose length is longer than permitted characters limit, it shall be counted as multiple messages, however will be delivered on handset as a single message.

- For standard Latin character set 160 characters per SMS is supported. If SMS text is longer than 160 characters, messages shall be calculated in multiples of 153 characters.
- For Unicode messaging (non-English) only 70 characters per SMS is supported. If Unicode SMS text is longer than 70 characters, messages shall be calculated in multiples of 67 characters.
- For Binary messaging 140 characters including UDH is supported. If Binary SMS is longer than 140 characters, messages shall be calculated in multiples of 134 characters.

Sender ID

As per DOT and TRAI guideline, all alpha sender ids and short-code sender id will be prefixed by Operator and circle code. For sending SMS in India, alpha sender Ids of 6 characters only is allowed for transactional SMS and numeric sender ID of 6 digits is allowed for promotional SMS. This has been done to make NCPR (National Do Not Call) compliance easier. The details of operator/circle and corresponding prefixes are mentioned at the end of the document.

For international mobile numbers, alpha numeric sender ID up to 16 characters is allowed.

JSON API URL Endpoint: https://api.myvaluefirst.com/psms/servlet/psms.JsonEservice

JSON Body:

{"@VER":"1.2",
"USER":{"@USERNAME":"","@PASSWORD":"","@UNIXTIMESTAMP":""},
"DLR":{"@URL":""},"SMS":[{"@UDH":"0","@CODING":"1","@TEXT":"","@PROPERTY":"0","@ID":"1",
"ADDRESS":[{"@FROM": "","@TO": "","@SEQ": "1","@TAG": "some clientside random data"},
{"@FROM": "","@TO": "","@SEQ": "1","@TAG": "some clientside random data"}]},
{"@UDH": "0","@CODING": "1","@TEXT": "","@PROPERTY": "0","@ID": "2",
"ADDRESS": [{"@FROM": "","@TO": "","@SEQ": "1","@TAG": "some clientside random data"}]}]}

Sample API:
API URL Endpoint: https://api.myvaluefirst.com/psms/servlet/psms.JsonEservice

{"@VER":"1.2",
"USER":{"@USERNAME":"demolemeilxml","@PASSWORD":"demole12","@UNIXTIMESTAMP":""},
"DLR":{"@URL":""},"SMS":[{"@UDH":"0","@CODING":"1","@TEXT":"Test","@PROPERTY":"0","@ID":"1",
"ADDRESS":[{"@FROM": "VFIRST","@TO": "8335896947","@SEQ": "1","@TAG": "some clientside random data"},
]}]}

Sample Response:

{"MESSAGEACK":{"GUID":{"GUID":"ki6rf573583051f430011c-8a8DEMOLEMEIL","SUBMITDATE":"2018-06-27
15:57:35","ID":1}}}

Test page URL - http://api.myvaluefirst.com/psms/json.jsp

User can use above URL to test the JSON API.

The following table describes the different elements of a SMS-MT request.

Tag Name	Description
Users	
USERNAME	User name of the sender of the message.
PASSWORD	User password.
SMS	
UDH	UDH is used for sending binary messages. For text message the value should be 0.
CODING	Extended type of messages. For text message the value should be 1.
PROPERTY	Unique property of message. Default value is 0. For sending Flash SMS the value should be 1.
ID	Unique ID of message. The client sends this value. In future communication, server sends this value back to the client. This value is used in future to check status of the message.
TEXT	This field describe the message text to be sent to receiver. SMS can contain up to 160 characters in Message Text. API allows user to send Message text of more than 160 characters. Credits will be deducted in the multiple of 1 60 characters according to the length of SMS.
SEND_ON	It is now possible to schedule a message. To schedule message to go at a later time, user can specify "SEND_ON" date as attribute of SMS tag. Only absolute date is supported. The value should be given in "YYYY-MM-DD HH:MM:SS TIMEZONE" format. Time zone is difference w.r.t. to GMT. Please refer Scheduling Support for more information on this feature.
ADDRESS	Describe the Sender as well as Receiver address
FROM	The Sender of the message. This field should conform to Sender Phone Number guidelines
TO	Person receiving the SMS, should confirm to Receiver Phone Number guidelines
SEQ	Unique Sequence ID. Must be an integer and must be unique to each SMS. While checking message status you must send this value.
TAG	A text that identify message. This is an optional parameter

SMS-MT Example of Response

The following example shows sample response of ValueFirst JSON API.

{"MESSAGEACK":{"GUID":[{"GUID":"ki2ec395172653f410004txoenc9kDEFAULT","SUBMITDATE":"2018-02-14 12:39:51","ID":1},{"GUID":"ki2ec395173653f410004au35h8m7DEFAULT","SUBMITDATE":"2018-02-14 12:39:51","ID":2}]}}

The following table describes the different elements of SMS-MT Response.

Tag Name	Description
GUID	A globally unique message ID that is generated for each <SMS> tag. Note that, in future to check the status of the message you must save this code.
SUBMITDATE	The date and time when the transaction was completed.
ID	Unique SMS ID sent by the customer. For each message a unique GUID is generated. The Server sends the SMS ID so that the client application can map the GUID to the SMS ID provided by them.
ERROR	**(In case of any error)** To conserve bandwidth utilization ValueFirst JSON API only sends Sequence information of messages that has either some error or were rejected because of some error. If there are no errors in a particular message, you shall not receive any confirmation of each address SEQ. For instance, in the above example in message ID 1 (of client) the TO number „My company" was rejected as non-numeric. The second message does not have any error, and hence there was no error information for the second part. **SEQ**: The Sequence ID (provided by client) that has error. **CODE**: Reason why the message wasn't accepted. The table shown next describes these error conditions.

Encoding Procedure

ValueFirst Server accepts all content in JSON. As your message is an JSON packet, special characters in message text needs to be converted JSON encoded. As a rule of thumb all string data should be JSON encoded as shown below:

Note: This is only required if you are posting data through a client application. Web browsers can automatically convert the text to HTML encoded format. The encoding for sending message through ValueFirst Pace Server requires two steps.

Step 1

The following table displays the codes that have to be replaced.

Code	Replace with
#39 (single quote)	&apos
#32 (space)	&#032
#34 (double quote)	&quot
>	&gt
<	&lt
#13 (Line feed)	&#013
#10(form feed)	&#010
#9(Tab)	&#009

Step 2

ValueFirst Server accepts all data as a form post. Therefore, it is required that all JSON content needs to be URL encoded before hitting ValueFirst Server.

Rules for encoding JSON content to URL format:

1. Select for each character in messages.
2. If the ASCII value of the character is greater than 128 or smaller than 32 or the character is ☐*“, ☐#“, ☐%“, ☐<“, ☐>“ or ☐+“, replace it with its corresponding hexadecimal (hereinafter Hex) value (2 digits with leading zero) proceeded by a ☐%“ character, e.g., space is encoded into %20.
    - * is encoded into %2A
    - # is encoded into %23
    - % is encoded into %25
    - < is encoded into %3C
    - > is encoded into %3E
    - + is encoded into %2B
    - enter key (#13#10) is encoded into %0D%0A

DLR URL

Users can pass DLR URL along with the SMS packet on which ValueFirst API will send the DLR as soon as it is received at ValueFirst's end.

Below table depicts the parameter values to be passed to get corresponding values

Sample Parameter names	Values	Sample Response
TO	%p	919812345678
FROM	%P	VFIRST
TIME	%t	2017-05-23 16:55:18
MESSAGE_STATUS	%d	1
REASON_CODE	%2	000
DELIVERED_DATE	%3	2017-05-23 16:55:18
STATUS_ERROR	%4	8448
CLIENT_GUID	%5	kh5ng551155213b161011bme3vTESTUSER
CLIENT_SEQ_NUMBER	%6	Value as Submitted
MESSAGE_ID	%7	h5ng551155313946013uw3
CIRCLE	%8	Delhi
OPERATOR	%9	AIRCEL
TEXT_STATUS	%13	Success
SUBMIT_DATE	%14	2017-05-23 16:55:11
MSG_STATUS	%16	Delivered
Additional Parameter 1	%21	Value as Submitted
Additional Parameter 2	%22	Value as Submitted
Additional Parameter 3	%23	Value as Submitted
Additional Parameter 4	%24	Value as Submitted
Additional Parameter 5	%25	Value as Submitted

Note:

In the requested DLR URL, the attributes used in the URL can be named accordingly but values used corresponding to used attributes or variables are case sensitive.

Standard Error Codes

All errors that may come across in ValueFirst JSON API are listed below.

Error Code	Description
General	
52992	Username / Password incorrect
57089	Contract expired
57090	User Credit expired
57091	User disabled
65280	Service is temporarily unavailable
65535	The specified message does not conform to DTD
0	SMS submitted success NO Error (not returned in ValueFirst JSON API)
Message Post	
28673	Destination number not numeric
28674	Destination number empty
28675	Sender address empty
28676	Template Mismatch
28677	UDH is invalid / SPAM message
28678	Coding is invalid
28679	SMS text is empty
28680	Invalid sender ID
28681	Invalid message, Duplicate message, Submit failed
28682	Invalid Receiver ID (will validate Indian mobile numbers only.)
28683	Invalid Date time for message Schedule (If the date specified in message post for schedule delivery is less than current date or more than expiry date or more than 1 year)
Status Request	
8448	Message delivered successfully
8449	Message failed
8450	Message ID is invalid
Scheduler Related	
13568	Command Completed Successfully
13569	Cannot update/delete schedule since it has already been processed
13570	Cannot update schedule since the new date-time parameter is incorrect.
13571	Invalid SMS ID/GUID
13572	Invalid Status type for schedule search query. The status strings can be “PROCESSED”, “PENDING” and “ERROR”.
13573	Invalid date time parameter for schedule search query
13574	Invalid GUID for GUID search query
13575	Invalid command action

Note: There isn“t any status returned in case message is in waiting status. Therefore, there would not be any status tag in JSON in case of waiting status.

“Reason for failure” codes are SMSC specific and hence are not covered here.

Regulatory Implementation and Impact

Sender ID Regulation

Telecom Regulatory Authority of India (TRAI) has given a direction to all telecom service provider of India to prefix an Identification Code before SenderID for every message sent using alpha and numeric sender id. The Direction can be downloaded directly from TRAI website or simply by clicking following link:
http://www.trai.gov.in/WriteReadData/trai/upload/Directives/131/direction10dec08.pdf

The Identification Code will be of three characters, consisting, **Service Provider Code** and **Service Area Code**, followed by a **Hyphen** character. Hence, the maximum length of a sender ID has been fixed to 6 characters for alpha and numeric both.

The details of operator codes are as below:

LIST OF CODES FOR SERVICE PROVIDERS		
S.No.	**Service Provider**	**Code**
1	Aircel Ltd Aircel Cellular Ltd Dishnet Wireless Ltd	**D**
2	Bharti Airtel Ltd Bharti Hexacom Ltd	**A**
3	Bharat Sanchar Nigam Ltd	**B**
4	BPL Mobile Communications Ltd Loop Telecom Pvt. Ltd	**L**
5	Datacom Solutions Pvt. Ltd	**C**
6	HFCL Infotel Ltd	**H**
7	Idea Cellular Ltd Aditya Birla Telecom Ltd	**I**
8	Mahanagar Telephone Nigam Ltd	**M**
9	Reliance Communications Ltd	**R**
10	Reliance Telecom Ltd	**E**
11	S. Tel Ltd	**S**
12	Shyam Telecom Ltd	**Y**
13	Spice Communications Ltd	**P**
14	Swan Telecom Pvt. Ltd	**W**
15	Tata Teleservices Ltd Tata Teleservices (Mah) Ltd	**T**
16	Unitech Group of Companies	**U**
17	Vodafone Group of Companies	**V**

The Details of Circle codes are as below:

LIST OF CODES FOR SERVICE AREA			
SLNO	Service Area	No of UASLs/CMSPs (Including recntly issued new licenses	Code
1	Andhra Pradesh	13	A
2	Assam	12	S
3	Bihar	12	B
4	Delhi	13	D
5	Gujarat	12	G
6	Haryana	13	H
7	Himachal Pradesh	13	I
8	Jammu & Kashmir	7	J
9	Karnataka	12	X
10	Kerala	13	L
11	Kolkata	13	K
12	Madhya Pradesh	12	Y
13	Maharashtra	12	Z
14	Mumbai	12	M
15	North East	11	N
16	Orissa	12	O
17	Punjab	13	P
18	Rajasthan	13	R
19	TamilNadu including Chennai	13	T
20	UP-East	12	E
21	UP-West	12	W
22	West Bengal	12	V

National Customer Call Preference Registry (NCCPR)

NCCPR (previously known as NDNC) is a database of all users who do not wish to receive unsolicited commercial communication. The list is managed by TRAI. ValueFirst has a strict No-SPAM policy and hence a person whose mobile number exists in this list must not be sent any commercial communication using voice or SMS, unless s/he has not given explicit permission to receive so.

Thank You!

Team ValueFirst