User Integration Manual: OMNI Channel API

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1 Introduction

OMNI Channel API provides authorized Customers with possibility to submit Viber Service Messages and/or SMS messages to NTH OMNI Channel Gateway, using standard HTTP protocol.

2 Document History

Date	Version	Remark
2016-08-03	v1.0	Initial version.
2016-09-15	v1.1	Added SMS channel
2016-11-02	v1.2	Viber message TTL - HTTP request changes
2016-12-15	v1.3	Omni channel scenario support

3 References

N/A

4 Terminology and Abbreviations

Domain name - A name that identifies one or more IP addresses. Domain names always have at least two parts that are separated by dots (for instance lsoft.com). The part on the left is the second-level domain (more specific), while the part on the right is the top-level domain (more general).
JSON - is short for JavaScript Object Notation, and is a way to store information in an organized, easy-to-access manner. In a nutshell, it gives us a human-readable collection of data that we can access in a really logical manner.
REST (REpresentational State Transfer) - is an architectural style, and an approach to communications that is often used in the development of Web services. The use of REST is often preferred over the more heavyweight SOAP (Simple Object Access Protocol) style because REST does not leverage as much bandwidth, which makes it a better fit for use over the Internet. The SOAP approach requires writing or using a provided server program (to serve data) and a client program (to request data).
HTTP - is short for Hyper Text Transfer Protocol. HTTP is the underlying protocol used by the World Wide Web and this protocol defines how messages are formatted and transmitted, and what actions Web servers and browsers should take in response to various commands.
Viber Service Messages are messages that are sent from various companies or aggregators that have partnered with Viber to users with installed Viber application on mobile device. Usually companies or aggregators would send these messages as SMS message to user mobile device. With Viber service messages, handset user will receive these messages directly to Viber application. It is an innovative and simple way to get important messages from leading companies or aggregators directly to users of Viber application. Viber Service Message has several advantages compared to SMS, message can be up to 1000 characters long, including images and call-to-action buttons. (hyperlinked to URL of your choice, e.g. your web site, landing page..etc.)

5 Prerequisites

The following conditions must be met to enable message submission:

- Username and password needed for Basic authorization.
- Internet connection with fixed IP address.

6 General Overview

This chapter provides general overview of two main API functions:

- Sending Viber Service Message or SMS message.
- Delivery reports (DLR).

6.1 Authorization

Each message request must be authorized. For this purpose API uses basic authentication. Authentication data are sent via HTTP header “Authorization”.

Steps to construct authorization header:

1. Build a string of the form username:password.
2. Base64 encode the string.
3. Supply an “Authorization” header with content “Basic” followed by the encoded string. For example, the string “test:test” encodes to “dGVzdDp0ZXN0” in base64, so the Authorization header will be:

```
Authorization: Basic dGVzdDp0ZXN0
```

6.2 Content type

The message request must be in JSON format. Because of that HTTP request must have HTTP header “Content-Type” that must have value “application/json”.

6.3 Sending message

To send message to the end user, the customer needs to send HTTP POST request with message content in request body. For example:

```
POST /v1/omni/message HTTP/1.1
Host: omni.mobile-gw.com:8000
Authorization: Basic dGVzdDp0ZXN0
Content-Type: application/json
Accept: application/json

{
  "channels": [
    "VIBER", "SMS"
  ],
  "destinations": [
    { "phoneNumber":"41791231234"}
  ],
  "transactionId": "92daae80-aff5-440d-864a-1d96c23bd4e0",
  "dlr": true,
  "dlrUrl": "http://dlr.company.com/dlr",
  "viber": {
    "tag": "Camp 1",
    "text": "Viber text",
    "expiryText": "Viber expiry text",
    "ttl": 3600,
    "label": "promotion",
    "smartphoneOnly": false,
    "buttonCaption": "Click me",
    "buttonAction": "http://www.viber.com/en/",
    "image": "http://www.viber.com/sites/all/themes/viber/images/viber-
iconV2.png"
  },
  "sms": {
    "sender": "smssender",
    "text": "Sms text"
  }
}
```

Parameters:

channels	**Required** (array of stings) The list of message channels. Possible values in list are: • VIBER - sending only VIBER message, • SMS - sending only SMS message, • VIBER and SMS - at first NTH OMNI Channel Gateway will try to deliver a Viber service message. If the Viber Service Message is undeliverable for whatsoever reason, NTH OMNI Channel Gateway will send an SMS message. A vice versa combination is not possible. Possible reasons for Viber Service Message non-delivery are: • subscriber doesn't have Viber app installed on device • subscriber is not reachable within given TTL • subscriber has Viber app that does not support Viber Service Messages (e.g. Windows Phone OS version of Viber app)
destinations	**Required** (array of object) The list of phone numbers. With one message request the customer can send up to 100 phone numbers.
transactionId	**Optional** (string) Transaction id in customer's system. It will be sent back to the customer with DLR request. Maximum length is 50 characters
phoneNumber	**Required** (string) The phone number of end user. Phone number must be in international format without leading zeroes or plus sign (e.g. 41791231234)
dlr	**Optional** (boolean) The flag indicates if delivery receipt request must be sent to customer's application.
dlr_url	**Optional** (string) The URL address where DLR requests will be sent. It overrides default DLR URL address for customer's service.
viber	**Optional** (object) This object is required if a list of channels contains VIBER channel. Parameters text, buttonCaption + buttonAction and image make Viber Service Message content. There are 4 possible combinations of Viber Service Message content: • text only, • image only, • text + button, • text + button + image.
tag	**Optional** (string) Free text, reports are generated based on tags. (e.g. "campaign_name")
viber.text	**Optional** (string) The Viber Service Message text. Text length can be up to 1000 characters. VIBER text can be sent alone, without button or image.
expiryText	**Required** (string) Relevant for iOS end users only. This is the text that will be displayed if message expires.

ttl	**Required** (number) TTL value in seconds (range - 15 to 86400). If the Viber Service Message can't be delivered within given TTL, and list of channels also contains SMS channel, NTH OMNI Channel Gateway will send an SMS message as a fall-back.
label	**Optional** (string) The type of the Viber Service Message. Possible values are promotion or transaction. Default value is promotion.
smartphoneOnly	**Optional** (boolean) The flag indicates if Viber Service Message will be sent only to smartphones.
buttonCaption	**Optional** (string) A textual writing on the button. Maximum length is 30 characters. The VIBER button can be sent only if Viber Service Message contains text.
buttonAction	**Optional** (string) The link of button action.
image	**Optional** (string) The URL address of image sent to end user. The VIBER image can be sent only alone or together with text and button.
sms	**Optional** (object) This object is required if list of channels contains SMS channel.
sender	**Required** (string) SMS originator ("sender") that will be displayed on mobile device's screen. • Alphanumeric origin, max. 11 characters • Numeric origin, max. 20 characters
sms.text	**Required** (string) The SMS message text. In response NTH OMNI Channel Gateway will return parameter smsCount which contains number of SMS messages that will be sent to end user. Message text which may consist of up to 160 characters belonging to the following set: • Standard GSM 03.38 character set • Blank space • The meta characters **\n** (line feed) and **\r** (carriage return) *Note:* Please find more information about SMS text, supported features and character set in chapter GSM 03.38 Character Set

When message request is validated and accepted/rejected NTH OMNI Channel Gateway will return response:

```
HTTP/1.1 200 OK
Content-Type: application/json

{
   "resultCode":0,
   "resultDescription":"OK",
   "messages":[
      {
         "messageId":"b0de2135-e6ea-44af-bc27-ad75623bca72",
         "destination":{
            "phoneNumber":"41791231234"
```

```
            },
            "status":{
               "code":0,
               "description":"Accepted"
            }
         }
      ],
      "smsCount":1
}
```


Response parameters:

resultCode	**Required** (number) The status of submitted request. Possible values are: • **0** - OK - received request is OK. • **1** - Partial OK - received request is partial OK. This code is returned when request contains multiple destinations, and some of destinations are in invalid format. • **10** - Invalid parameter - some of received parameters are invalid or missing. • **11** - Requested channel is not allowed. • **20** - Internal error occurred.
resultDescription	**Required** (string) The description of received result code.
messages	**Required** (array of objects) The list of messages by phone number generated in NTH OMNI Channel Gateway. .
messageId	**Required** (string) The message id generated in NTH OMNI Channel Gateway system. Up to 50 characters.
destination	**Required** (object) Contains phoneNumber related to sent message.
status	**Required** (object) Contains status code.
code	**Required** (number) The status code of message. Possible values: • **0** - Accepted - The phoneNumber is correctly formatted and message will be sent to this phone number. • **1** - Rejected - The phoneNumber is invalid and message will not be sent to this phone number.
description	**Required** (string) The textual description of status code.
smsCount	**Optional** (number) This parameter is set when message request contains SMS channel. It contains number of SMS messages that will be sent to end user (depending on SMS text length).

6.4 Delivery reports (DLR)

If message request has parameter “dlr” set to true, NTH OMNI Channel Gateway will send delivery report to customer’s URL address. Customer should provide URL address to which NTH OMNI Channel Gateway will deliver message "dlr"-s upon service setup. Provided delivery report URL address is configured on NTH OMNI Channel Gateway, but also with each message request customer can override set URL in parameter “dlr_url” so delivery report is delivered to different URL address.
In response to request, customer should return HTTP 200 OK.
If NTH OMNI Channel Gateway received different HTTP response code, NTH OMNI Channel Gateway will try resend DLR request within 24 hours every 10 seconds.

Sample HTTP DLR looks like:

```
POST /dlr HTTP/1.1
Host: dlr.company.com
Content-Type: application/json

{
  "messageId": "b0de2135-e6ea-44af-bc27-ad75623bca72",
  "transactionId": "92daae80-aff5-440d-864a-1d96c23bd4e0",
  "channel": "VIBER",
  "time": "2017-01-10T10:05:22.289+0100",
  "status": {
    "code": 1,
    "details": "Delivered"
  }
}
```

Parameters:

messageId	**Required** (string) The message id received in response when message was sent to NTH OMNI Channel Gateway
transactionId	**Optional** (string) Customer’s transaction id sent in message request.
channel	**Required** (string) The message channel related to DLR request. Possible values are: VIBER or SMS.
time	**Required** (date) The time of DLR. The format of time is yyyy-MM-dd'T'HH:mm:ss.SSSZ.
status	**Required** (object) The object that contains status parameters.
code	**Required** (number) The status code. Possible values per channel: **VIBER**: • **1** - DELIVERED - The Viber Service Message is delivered to the end user. • **2** - SEEN - The Viber Service Message is seen by the end user. • **10** - DELIVERY FAILED - Unable to deliver the Viber Service Message to the end user. • **11** - EXPIRED - Unable to deliver the Viber Service Message in TTL. • **12** - INSUFFICIENT_FUNDS – Unable to deliver the Viber Service

	Message due to insufficient funds. • **20** - ERROR - Internal error occurred when trying to send Viber Service Message. **SMS**: • **0** - SUBMITTED - The SMS message is submitted to SMSC. This status is sent only when SMS message is sent after the Viber Service Message TTL expires or Viber Service Message is not delivered. • **1** - DELIVERED - The SMS message is delivered to the end user. • **10** - DELIVERY_FAILED - Unable to deliver the SMS message to the end user. • **20** - ERROR - Internal error occurred when trying to send SMS message.
details	**Required** (stings) Detailed explanations of received status depending on used channel.

Response example:

```
HTTP/1.1 200 OK
```

7 NTH Omni channel gateway REST API request examples

7.1 Invalid message request

Request:

```
POST /v1/omni/message HTTP/1.1
Host: omni.mobile-gw.com:8000
Authorization: Basic dGVzdDp0ZXN0
Content-Type: application/json
Accept: application/json

{
  "channels": [
    "VIBER", "SMS"
  ],
  "destinations": [
    { "phoneNumber":"41791231234"}
  ],
  "transactionId": "92daae80-aff5-440d-864a-1d96c23bd4e0",
  "dlr": true,
  "dlrUrl": "http://dlr.company.com/dlr",
  "viber": {
    "tag": "Camp 1",
    "text": "Viber text",
    "expiryText": "Viber expiry text",
    "ttl": 3600,
    "label": "promotion",
    "buttonCaption": "Click me",
    "buttonAction": "http://www.viber.com/en/",
    "image": "http://www.viber.com/sites/all/themes/viber/images/viber-
iconV2.png"
  }
```

```
}
```

Response:

```
HTTP/1.1 200 OK
Content-Type: application/json

{
  "resultCode": 10,
  "resultDescription": "Sms message not defined"
}
```

7.2 VIBER message request

Request:

```
POST /v1/omni/message HTTP/1.1
Host: omni.mobile-gw.com:8000
Authorization: Basic dGVzdDp0ZXN0
Content-Type: application/json
Accept: application/json

{
  "channels": [
    "VIBER"
  ],
  "destinations": [
    { "phoneNumber":"41791231234"}
  ],
  "transactionId": "c53185ec-9476-4467-ac54-4f4d9b6b1733",
  "dlr": true,
  "dlrUrl": "http://dlr.company.com/dlr",
  "viber": {
    "tag": "Campaign 2",
    "text": "Viber text",
    "expiryText": "Viber expiry text",
    "ttl": 3600,
    "label": "promotion",
    "buttonCaption": "Click me",
    "buttonAction": "http://www.viber.com/en/",
    "image": "http://www.viber.com/sites/all/themes/viber/images/viber-
iconV2.png"
  }
}
```

Response:

```
HTTP/1.1 200 OK
Content-Type: application/json

{
  "resultCode": 0,
  "resultDescription": "OK",
  "messages": [
    {
```

```
      "messageId": "9d1bd2cf-143a-4934-8435-6a644242b7e6",
      "destination": {
        "phoneNumber": "41791231234"
      },
      "status": {
        "code": 0,
        "description": "Accepted"
      }
    }
  ]
}
```

7.3 SMS message request

Request:

```
POST /v1/omni/message HTTP/1.1
Host: omni.mobile-gw.com:8000
Authorization: Basic dGVzdDp0ZXN0
Content-Type: application/json
Accept: application/json

{
  "channels": [
    "SMS"
  ],
  "destinations": [
    {
      "phoneNumber": "41791231234"
    }
  ],
  "transactionId": "11c83fe6-3c2c-4bb8-b665-80d38e242b4e",
  "dlr": true,
  "dlrUrl": "http://dlr.company.com/dlr",
  "sms": {
    "sender": "smssender",
    "text": "Sms text"
  }
}
```

Response:

```
HTTP/1.1 200 OK
Content-Type: application/json

{
  "resultCode": 0,
  "resultDescription": "OK",
  "messages": [
    {
      "messageId": "b0ad1b30-8364-478e-9740-1136fe55f075",
      "destination": {
        "phoneNumber": "41791231234"
      },
      "status": {
        "code": 0,
```

```
        "description": "Accepted"
      }
    }
  ],
  "smsCount": 1
}
```

7.4 VIBER + SMS message request

Request:

```
POST /v1/omni/message HTTP/1.1
Host: omni.mobile-gw.com:8000
Authorization: Basic dGVzdDp0ZXN0
Content-Type: application/json
Accept: application/json

{
  "channels": [
    "VIBER", "SMS"
  ],
  "destinations": [
    { "phoneNumber":"41791231234"}
  ],
  "transactionId": "92daae80-aff5-440d-864a-1d96c23bd4e0",
  "dlr": true,
  "dlrUrl": "http://dlr.company.com/dlr",
  "viber": {
    "tag": "Campaign 2",
    "text": "Viber text",
    "expiryText": "Viber expiry text",
    "ttl": 3600,
    "label": "promotion",
    "buttonCaption": "Click me",
    "buttonAction": "http://www.viber.com/en/",
    "image": "http://www.viber.com/sites/all/themes/viber/images/viber-
iconV2.png"
  },
  "sms": {
    "sender": "smssender",
    "text": "Sms text"
  }
}
```

Response:

```
HTTP/1.1 200 OK
Content-Type: application/json

{
   "resultCode":0,
   "resultDescription":"OK",
   "messages":[
      {
         "messageId":"b0de2135-e6ea-44af-bc27-ad75623bca72",
         "destination":{
```

```
            "phoneNumber":"41791231234"
         },
         "status":{
            "code":0,
            "description":"Accepted"
         }
      }
   ],
   "smsCount":1
}
```

7.5 Message request with multiple destinations

Request:

```
POST /v1/omni/message HTTP/1.1
Host: omni.mobile-gw.com:8000
Authorization: Basic dGVzdDp0ZXN0
Content-Type: application/json
Accept: application/json

{
  "channels": [
    "VIBER"
  ],
  "destinations": [
    {
      "phoneNumber": "41791231234"
    },
    {
      "phoneNumber": "4179555555"
    },
    {
      "phoneNumber": "41797777777"
    }
  ],
  "transactionId": "92daae80-aff5-440d-864a-1d96c23bd4e0",
  "dlr": true,
  "dlrUrl": "http:\/\/dlr.company.com\/dlr",
  "viber": {
    "tag": "Campaign 3",
    "text": "Viber text",
    "expiryText": "Viber expiry text",
    "ttl": 3600,
    "label": "promotion",
    "buttonCaption": "Click me",
    "buttonAction": "http://www.viber.com/en/",
    "image": "http://www.viber.com/sites/all/themes/viber/images/viber-
iconV2.png"
  }
}
```

Response:

```
HTTP/1.1 200 OK
Content-Type: application/json
```

```
{
  "resultCode": 0,
  "resultDescription": "OK",
  "messages": [
    {
      "messageId": "b25f60cb-6ac2-4666-8db7-c0c1588dd940",
      "destination": {
        "phoneNumber": "41791231234"
      },
      "status": {
        "code": 0,
        "description": "Accepted"
      }
    },
    {
      "messageId": "e282a9ad-8b9d-4315-807d-cc3795c5bccd",
      "destination": {
        "phoneNumber": "4179555555"
      },
      "status": {
        "code": 0,
        "description": "Accepted"
      }
    },
    {
      "messageId": "1ee2d4c5-f2d2-49a8-9c85-c19afe454f57",
      "destination": {
        "phoneNumber": "41797777777"
      },
      "status": {
        "code": 0,
        "description": "Accepted"
      }
    }
  ]
}
```

7.6 Message request with multiple destinations – partially OK

Request:

```
POST /v1/omni/message HTTP/1.1
Host: omni.mobile-gw.com:8000
Authorization: Basic dGVzdDp0ZXN0
Content-Type: application/json
Accept: application/json

{
  "channels": [
    "VIBER"
  ],
  "destinations": [
    {
      "phoneNumber": "41791231234"
    },
    {
      "phoneNumber": "+4179555555"
```

```
    },
    {
      "phoneNumber": "0041797777777"
    },
    {
      "phoneNumber": "+4179777ab222"
    }
  ],
  "transactionId": "92daae80-aff5-440d-864a-1d96c23bd4e0",
  "dlr": true,
  "dlrUrl": "http:\/\/dlr.company.com\/dlr",
  "viber": {
    "tag": "Campaign 2",
    "text": "Viber text",
    "expiryText": "Viber expiry text",
    "ttl": 3600,
    "label": "promotion",
    "buttonCaption": "Click me",
    "buttonAction": "http://www.viber.com/en/",
    "image": "http://www.viber.com/sites/all/themes/viber/images/viber-
iconV2.png"
  }
}
```

Response:

```
HTTP/1.1 200 OK
Content-Type: application/json

{
  "resultCode": 1,
  "resultDescription": "Partial ok",
  "messages": [
    {
      "messageId": "d758c088-3455-4754-94b3-325e9e67e011",
      "destination": {
        "phoneNumber": "41791231234"
      },
      "status": {
        "code": 0,
        "description": "Accepted"
      }
    },
    {
      "messageId": "0160aa48-b8e1-4ae9-acf7-14f7bf33e9ea",
      "destination": {
        "phoneNumber": "4179555555"
      },
      "status": {
        "code": 0,
        "description": "Accepted"
      }
    },
    {
      "messageId": "c3b9e62c-dd9d-41c7-8604-d377caa04c40",
      "destination": {
        "phoneNumber": "41797777777"
      },
```

```
      "status": {
        "code": 0,
        "description": "Accepted"
      }
    },
    {
      "destination": {
        "phoneNumber": "+4179777ab222"
      },
      "status": {
        "code": 1,
        "description": "Invalid phone number"
      }
    }
  ]
}
```

7.7 DLR request for VIBER channel

Request:

```
POST /dlr HTTP/1.1
Host: dlr.company.com
Content-Type: application/json

POST /dlr HTTP/1.1
Host: dlr.company.com
Content-Type: application/json

{
  "messageId": "b0de2135-e6ea-44af-bc27-ad75623bca72",
  "transactionId": "92daae80-aff5-440d-864a-1d96c23bd4e0",
  "channel": "VIBER",
  "time": "2017-01-10T10:05:22.289+0100",
  "status": {
    "code": 10,
    "details": "SRVC_NOT_VIBER_USER"
  }
}
```

Response:

```
HTTP/1.1 200 OK
```

7.8 DLR request for SMS channel

Request:

```
POST /dlr HTTP/1.1
Host: dlr.company.com
Content-Type: application/json

POST /dlr HTTP/1.1
Host: dlr.company.com
Content-Type: application/json
```

```
{
  "messageId": "b0de2135-e6ea-44af-bc27-ad75623bca72",
  "transactionId": "92daae80-aff5-440d-864a-1d96c23bd4e0",
  "channel": "SMS",
  "time": "2017-01-10T10:05:22.772+0100",
  "status": {
    "code": 0,
    "details": "Submitted"
  }
}
```

Response:

```
HTTP/1.1 200 OK
```

8 GSM 03.38 Character Set

This section provides a table of all the characters supported by SMS. This is default character set supported by any mobile phone.

Bits per character: 7
SMS User Data Length meaning: Number of characters
CBS pad character: CR
Character table:

				b7	0	0	0	0	1	1	1	1
				b6	0	0	1	1	0	0	1	1
				b5	0	1	0	1	0	1	0	1
b4	b3	b2	b1		0	1	2	3	4	5	6	7
0	0	0	0	0	@	Δ	SP	0	¡	P	¿	p
0	0	0	1	1	£	_	!	1	A	Q	a	q
0	0	1	0	2	$	Φ	"	2	B	R	b	r
0	0	1	1	3	¥	Γ	#	3	C	S	c	s
0	1	0	0	4	è	Λ	¤	4	D	T	d	t
0	1	0	1	5	é	Ω	%	5	E	U	e	u
0	1	1	0	6	ù	Π	&	6	F	V	f	v
0	1	1	1	7	ì	Ψ	'	7	G	W	g	w
1	0	0	0	8	ò	Σ	(	8	H	X	h	x
1	0	0	1	9	Ç	Θ	)	9	I	Y	i	y
1	0	1	0	10	LF	Ξ	*	:	J	Z	j	z
1	0	1	1	11	Ø	1)	+	;	K	Ä	k	ä
1	1	0	0	12	ø	Æ	,	<	L	Ö	l	ö
1	1	0	1	13	CR	æ	-	=	M	Ñ	m	ñ
1	1	1	0	14	Å	ß	.	>	N	Ü	n	ü
1	1	1	1	15	å	É	/	?	O	§	o	à

Following table shows GSM 7-bit default alphabet extension table as defined in ETSI GSM 03.38.

NOTE: These characters can be used in standard SMS message without requiring special encoding, but count as 2 characters towards maximum text length due to the fact that each character from extended table requires two 7-bit bytes!.

				b7	0	0	0	0	1	1	1	1
				b6	0	0	1	1	0	0	1	1
				b5	0	1	0	1	0	1	0	1
b4	b3	b2	b1		0	1	2	3	4	5	6	7
0	0	0	0	0					|			
0	0	0	1	1								
0	0	1	0	2								
0	0	1	1	3								
0	1	0	0	4		^						
0	1	0	1	5							€	
0	1	1	0	6								
0	1	1	1	7								
1	0	0	0	8			}					
1	0	0	1	9			{					
1	0	1	0	10								
1	0	1	1	11								
1	1	0	0	12				[				

1	1	0	1	13				~				
1	1	1	0	14				]				
1	1	1	1	15			\					

In case of message text longer than 140 bytes the SMS message should be segmented into more messages and encoded with a proper concatenation header. The concatenation header length with additional fill bits requires seven 7-bit bytes. Meaning, that each SMS concatenation part can have up to 153 characters.