Large Account

HTTP API Specification v3.3

Doc Revision: 5

This document is delivered subject to the following conditions and restrictions:

- This document contains proprietary information belonging to Cellact Ltd. Such information is supplied solely for the purpose of assisting explicitly and appropriately authorized users of Cellact products.
- No part of this document may be used for any other purpose, disclosed to any person or firm or reproduced by any means, electronic or mechanical, without the express prior written permission of Cellact Ltd.
- The software described in this document is furnished under a license. The Cellact software may be used or copied only by the terms of that agreement.
- The information contained in this document, specifications on which the document is based and the examples contained in it are all subject to change without notice.
- Corporate and individual names and data used in examples herein are fictitious unless otherwise noted. The text and the graphics included in this document are for instruction, illustration, and reference only.
- The names of other companies, product brands, and services mentioned in this document are trademarks or registered trademarks of their respective holders.

Contents

List of Tables

List of Figures

Document Update Record

Date	Revision	
08/02/2018	Rel 3.3._5	Add sendivr examples
15/02/2017	Rel 3.3._4	Update IVR cmd
24/01/2017	Rel 3.3._3	Section 4.3.2 correction of XML
25/8/2016	Rel 3.3_2	Added IVR cmd (Recorded Message and Text to Message)
21/9/2015	Rel 3.2.1_3	Updated the document to focus on the deployed functionality
14/3/2011	Rel 3.2	Enhancement of the functionality
25/9/2008	Initial	

Purpose and Scope

This document describes the format of HTTP messages that activate Web Services provided by LA Server. In particular, delivery of SMS and pre-Recorded Voice Messages (RVM).

Audience

This guide is intended for developers of Applications that facilitate Raw Web Services provided by LA Server.

1 Before you start

1.1 Quick Glance at LA Web Service

The **Large Account (LA)** Application Platform enables **Content Providers (CP)** to use standard HTTP Web Service methods to:

- send and receive SMS messages to and from mobile subscribers
- send recorded voice messages (**RVM**) to cellular or wireline recipients
- send text-to-speech (TTS) message to cellular or wireline recipients

The service allows addressing a single subscriber (as in Two-Step authentication apps) or a list of subscribers (as in Marketing Campaign applications).

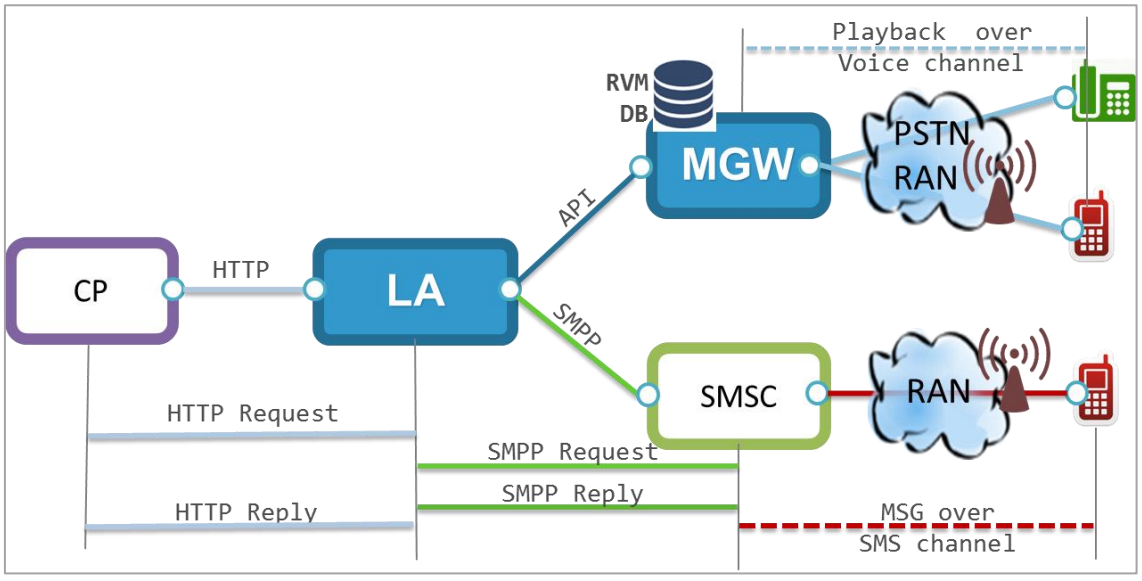
In addition to SMS or Voice Message delivery, LA provides the following features:

- Time-window for the scheduled delivery in the future
- Repeated delivery in the case of failure to reach the recipient of the message
- Reporting the status of the delivery to the specified Web Service and/or email address

End-points of the LA Web Service (both http and https) are:

- All **POST** are addressed to `//la.cellactpro.com/unistart5.asp`
- All **GET** are addressed to `//la.cellactpro.com/http_req.asp`

Figure 1 LA Server as a Front End to PSTN and RAN Networks



Please keep in mind that LA provides additional configurable features that may impact the outcome of the above functions. For example, the destination may be black-listed and hence shielded from the reception of SMS, time-of-day periods may be configured that block IVR calls (such as on weekends and night) and so forth.

1.2 Introducing the structure of the POST request

The body of the HTTP/POST request is encoded using XML format with the following three sub-sections:

```
<PALO>
  <HEAD>
    ▪ credentials of the caller
    ▪ parameters required to track the progress of the message
    ▪ scheduled delivery time
    ▪ number of retries
  </HEAD>
  <BODY>
    ▪ sender's MSISDN
    ▪ content or reference to the content ("link")
    ▪ MSISDNs of recipients
  </BODY>
  <OPTIONAL>
    ▪ Parameters that help App developer to coordinate between
      the request and the follow-up messages
  </OPTIONAL>
</PALO>
```

1.3 Preconditions

The following requirements must be settled before starting the service

1.3.1 SMS Delivery Service

- **Credentials of the Account**: The name of your Account, Name of User and its Password must be registered with LA.

  These parameters are checked by LA when handling HTTP requests to LA Web Service
- **IP address that is used by Account** – all HTTP requests from the Account must originate from the specified IP address.

  When LA receives HTTP request, it verifies if there is a match between the message's Source IP address and the one that is associated with the Account
- **URL of the Endpoint on LA**: the URL of the LA Web Service.

1.3.2 Voice Message Delivery Service

- All attributes specified in **Section 1.3.1**
- TTS and RVM - Account has IVR Capability
- The current "IVR Balance" of the account is above the required threshold
- **RVM only –** Account has Virtual Number that is used by the accounts's representative to record messages

1.3.3 SMS Reception Service

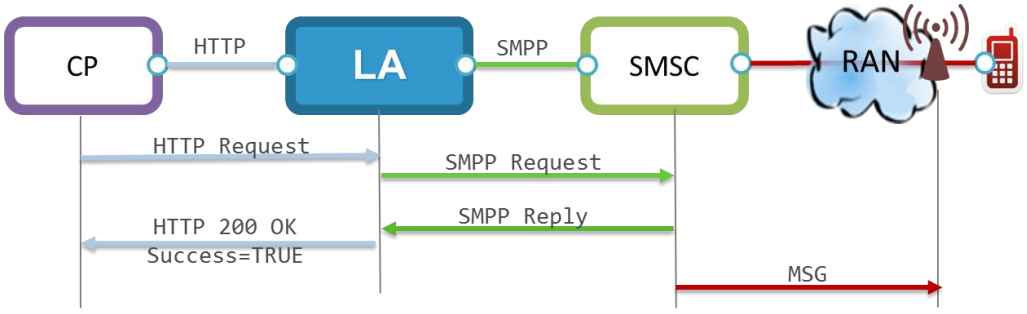
- **VN of the Account**: Virtual Number used by the subscriber to send SMS to the Account
- **URL of the Account**: the Endpoint (URL of the Account) to be used by LA when forwarding SMS to the Account.

2 Sending SMS

2.1 Introduction

Both **HTTP/GET and HTTP/POST** methods apply to deliver a message to the designated subscriber. The following diagram presents simplified flow that is shared by both methods.

Figure 2 Simplified flow of SMS delivery to subscriber



HTTP/GET applies to for SMS delivery that uses default delivery parameters configured on SMSC. In particular, the delivery is ASAP, and the number of attempts is as defined on SMSC.

HTTP/POST allows to customize the following parameters:

- The scheduled time of delivery
- The duration that SMSC retains the message and attempts resending it, in case of delivery failure, before dropping the message

URL for reporting the tracking information regarding the status of the delivery

NOTE

HTTP 200 OK is returned to the caller if the request has reached the LA application.

Further, the data in the body of the HTTP 200 OK message specifies whether the request has reached the SMSC. However, it does not indicate whether the message has reached its final destination.

2.2 Using HTTP/GET

2.2.1 Endpoints

The endpoints are:

```
HTTPS - https://la.cellactpro.com/http_req.asp
HTTP  - http://la.cellactpro.com/http_req.asp
```

2.2.2 Example

The following URL delivers the content using SMS to 3 subscribers. Please note that the list of subscribers is comma-separated.

```
http://la.cellactpro.com/http_req.asp?FROM=CompanyName&USER
=username&PASSWORD=password&APP=LA&CMD=sendtextmt&SENDER=055700081
6&CONTENT=Test&TO=0501234567,0521234567,0541234567&SN=SMS&MSGID=12
                                    3456&CONFMAIL=Example@test.com
```

2.2.3 Specification of the GET Request

Table 1: Parameters for the GET

Attribute	M/O	Description
FROM	M	Name of the Account
USER	M	Credentials of the representative of the Account
PASSWORD	M	
APP	M	fixed value – **'LA'**
CMD	M	fixed value – **`sendtxtmt`**
SENDER	M	MSISDN of the sender of the message.
CONTENT	M	The content of the message that will be displayed on the subscriber's handset. Characters must be provided using UTF-8 Unicode
TO	M	Comma-separated list of numbers
MSG_ID	O	**Optional**. An identifier provided by the caller. Not used by LA. However, it is copied by LA into all follow-up messages triggered by this request.
SN	O	
CONFMAIL	O	**Optional**. The email address used to send SMS delivery status reports (see Section 2.4)

2.2.4 Specification of the Response

See Section 2.3.4

2.3 Using HTTP/POST

This section specifies HTTP/POST without the option to generate SMS Delivery Reports. The option to generate the Reports is described in the following section.

2.3.1 Endpoints

The endpoints for the HTTP/POST are:

```
- https://la.cellactpro.com/unistart5.asp  HTTPS
- http://la.cellactpro.com/unistart5.asp   HTTP
```

2.3.2 Examples

2.3.2.1 Minimum Example – mandatory parameters

Let's start by looking at a simple example of how to send a POST request:

```
<PALO>
  <HEAD>
      <FROM>company name</FROM>
      <APP USER="username" PASSWORD="123456">LA</APP>
      <CMD>sendtextmt</CMD>
  </HEAD>
  <BODY>
      <SENDER>+97256337000</SENDER>
      <CONTENT><![CDATA[Hello >>>>>>>> <world>]]></CONTENT>
      <DEST_LIST>
          <TO>+972506501020</TO>
          <TO>+972506501555</TO>
          <TO>+972506501777</TO>
      </DEST_LIST>
  </BODY>
</PALO>
```

Notes:

1. Request to deliver SMS to a list of subscribers is converted by LA to the corresponding number of single SMS requests to SMSC.

2. ![CDATA[xxx]]: Indicates “escape” for text provided within XML format. It allows using(within the inner [ ] brackets) any characters, including '<' or '>' that, otherwise, are interpreted by the XML parser

3. Unicode: Characters used to specify the values of attributes must be in UTF-8 – Unicode. E.g., Hebrew characters must be coded in UTF-8. Example: %u05D2%u05D1%u05D0 (אבג)

2.3.2.2 Example – optional parameters

The following example includes optional specifications:

- **TTS** and **TTL** tags in the <**HEAD**> section of the message

  TTS indicates the delay after which the 1st message delivery attempt will be made. TTL indicates the period during which SMSC will attempt to deliver the message.

  These parameters overwrite the defaults used by LA

- **MSG_ID** and **SERVICE_NAME** in the <**OPTIONAL**> section of the message.

  Both are application-specific identifiers that are used in all subsequent messages associated with the POST request that specified them.

```
<PALO>
  <HEAD>
      <FROM>company name</FROM>
      <APP USER="username" PASSWORD="password">LA</APP>
      <CMD>sendtextmt</CMD>
      <TTS>90</TTS>
      <TTL>180</TTL>
  </HEAD>
  <BODY>
      <SENDER>0557000816</SENDER>
      <CONTENT>Test TTL and TTS options</CONTENT>
      <DEST_LIST>
          <TO>+972506501020</TO>
      </DEST_LIST>
  </BODY>
  <OPTIONAL>
      <MSG_ID>1123527</MSG_ID>
      <SERVICE_NAME>string</SERVICE_NAME>
  </OPTIONAL>
</PALO>
```

2.3.3 Specification of the POST Request

HTTP POST request contains a body that is encoded using XML notation. It has the following outline, two mandatory sections (<HEAD> and <BODY>) and one optional section (<OPTIONAL>):

Table 2: Parameters of the POST

Attribute	M/O	Value and Description	
PALO	M	The root tag of the XML request.	
Parameters in the HEAD Section			
FROM	M	Name of the Account	
USER	M	Credentials of the representative of the Account	
PASSWORD	M		
APP	M	**LA**	Used by LA Server to route the request to the processing assigned to handle this message
CMD	M	**`sendtxt`**	
TTS	O	Time To Send. (Optional) Unit: minutes relative to the time of the request. Max: 10080 (7 days) Specifies the designated time of delivery relative to the current time.	
TTL	O	Time To Live (Optional) Unit: minutes. The default is 1440 min (1 day). The minimum is 15 min. Specifies the duration that the SMSC keeps the message (and attempts retransmits) in case the 1st delivery fails	
Parameters in the BODY Section			
SENDER	M	MSISDN of the sender of the message.	
CONTENT	M	The content of the message that will be displayed on the subscriber's handset. Characters must be provided using UTF-8 Unicode	
DEST_LIST	M	List of Destination phone numbers. Each number is enclosed in <TO> </TO> frame.	
Parameters in the OPTIONAL Section			
MSG_ID	**O**	**Optional**. An identifier provided by the caller. Not used by LA. However, it is copied by LA into all follow-up messages triggered by this request.	
SERVICE_NAME	**O**	**Optional**. An identifier provided by the caller. Not used by LA. However, it is copied by LA into all follow-up messages triggered by this request.	

2.3.4 Specification of the Response to the POST

LA Web Service always returns an **HTTP 200 OK** followed by an indication of success or failure in the BODY of the HTTP 200 message. In the case of success, token “SESSION” is returned. It is used to correlate subsequent messages to CP that are related to this HTTP/POST

Example of success:

```
<PALO>
   <RESULT>True</RESULT>
   <SESSION>4e07d3be-eb3f-4d98-ace6-fd90342b0dec</SESSION>
   <OPTIONAL>
      <MSG_ID>12345</MSG_ID>
      <SERVICE_NAME>string</SERVICE_NAME>
   </OPTIONAL>
</PALO>
```

Example of failure

```
<PALO>
  <RESULT>false</RESULT>
  <DESCRIPTION>not an authorized user</DESCRIPTION>
  <OPTIONAL>
      <MSG_ID>1123528</MSG_ID>
      <SERVICE_NAME>string</SERVICE_NAME>
   </OPTIONAL>
</PALO>
```

Table 3 Parameters of the HTTP 200 OK Response

Attribute	Description
RESULT	True – indicates that LA has accepted the request False – indicates that the request has been declined by LA
SESSION	It is used to identify subsequent messages (such as delivery progress reports) that are related to this request (See BLMJ in Table 7)
DESCRIPTION	Verbal description of the reason for rejecting the request
MSG_ID, SERVICE_NAME	(Optional) Provided if and only if the HTTP Request used it. The value is the same as provided in the HTTP Request.

2.4 Enhancing HTTP/POST to Generate Progress Reports

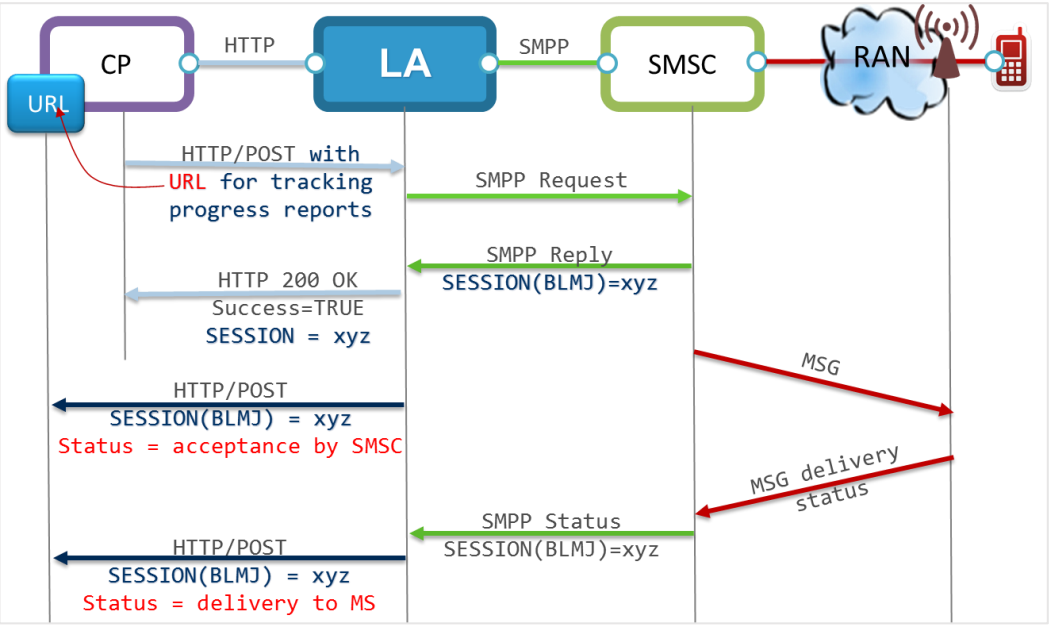
LA provides the Content Provider (CP) with an option to track message delivery status at two points on its path:

- the next element (e.g. SMSC)
- the final destination (subscriber).

For the App developer this feature allows to specify the destination of the reports:

- the URL that will be POSTed by LA using the format specified in this section
- email address.

Figure 3 Tracking the progress of successful message delivery



Each request, once accepted by the LA, generates either 1 or 2 reports as indicated below

The 1st report	The 2nd report	What it means	
mt_nok	none	SMSC rejected request – see the **REASON in Table 11**	
mt_ok	**mt_rej**	Request was accepted by SMSC	… but the delivery failed (rejected) – **Table 11**
	mt_del		… and the delivery succeeded

Table 4: Message progress statuses

	Description
mt_nok	SMSC declined the message
mt_ok	SMSC accepted the message
mt_rej	All attempts (by SMSC) to deliver the message to the destination have failed.
mt_del	The message was delivered to the destination

Note For a list of N recipients, LA generates N separate request to SMSC. Each SMS request results in 1 or 2 reports. Therefore, the total number of POST reports delivered to the designated URL shall be from N to 2N

2.4.1 Endpoints

The endpoints for the HTTP/POST are:

```
- https://la.cellactpro.com/unistart5.asp  HTTPS
- http://la.cellactpro.com/unistart5.asp   HTTP
```

2.4.2 Example

The following example specifies three recipients and the method to report message delivery progress (both email and POST):

```
<PALO>
  <HEAD>
      <FROM>Company_name</FROM>
      <APP USER="username" PASSWORD="123456">LA</APP>
      <CMD>sendtextmt</CMD>
      <TTS>90</TTS>
      <TTL>180</TTL>
      <CONF_LIST>
            <TO TECH="post">http://hello.com/cod.asp</TO>
            <TO TECH="email">xxx@xxx.xxx</TO>
      </CONF_LIST>
  </HEAD>
  <BODY>
      <SENDER>+97256337000</SENDER>
      <CONTENT><![CDATA[Hello >>>> world!]]></CONTENT>
      <DEST_LIST>
          <TO>+972506501020</TO>
          <TO>+972506501555</TO>
          <TO>+972506501777</TO>
      </DEST_LIST>
  </BODY>
  <OPTIONAL>
      <MSG_ID>1123528</MSG_ID>
  </OPTIONAL>
</PALO>
```

Assume the following scenario:

- Scheduled time for the playback (TTS) - in 90 min,
- Subscribers: A, B, C
- Duration of retries – 180 min (pause between retries – some default value (i.e. 30 min))

Table 5 Timeline and Value of Progress Reports

Recipient	Status of the recipient at the Start of the scheduled playout	POST received	0 try	1st retry	2nd retry	3rd retry

	time	0	0+90	0+120	0+150	0+180
A	Available	**mt_ok**	**mt_del**			
B	Not available but becomes available during one of the retries	**mt_ok**			**mt-del**	
C	Not available during all period of retries	**mt_ok**				**mt_rej**

2.4.3 Enhancement to HTTP/POST Request

The new attribute (**CONF_LIST**) in the **HEAD** Section of the HTTP/POST indicates the recipients of the message delivery reports – see Table 2

Table 6: Enhancement to Table 2: Request for Confirmation

Attribute	M/O	Description
CONF_LIST	O	**<TO TECH="post">** URL that will be used by LA to deliver "SMS Delivery Status" reports using standard http (TCP port: 80) **<TO TECH="email">** Email address for the "SMS Delivery Status"

2.4.4 Specification of the Response to the POST

See Section 2.3.4

2.4.5 Examples of the Progress-of-Delivery Reports

Tracking Reports are delivered using HTTP to port 80 of the URL(s) specified in the original SMS.

Message has been accepted by SMSC (**EVT==mt_ok**)

```
<PALO>
  <BLMJ>37f289e3-dca5-436a-8ddc-28257507d48a</BLMJ>
  <SENDER>1234</SENDER>
  <RECIPIENT>+972501234567</RECIPIENT>
  <FINAL_DATE>20080803122112</FINAL_DATE>
  <EVT>mt_ok</EVT>
  <REASON>5000</REASON>
  <MESSAGE_COUNT>1</MESSAGE_COUNT>
</PALO>
```

Message has been declined by SMSC (**EVT==mt_nok**)

```
<PALO>
  <BLMJ>d7e78097-4a7f-4893-8ab9-e47f4306fb87</BLMJ>
  <SENDER>0501234567</SENDER>
  <RECIPIENT>+972501234567</RECIPIENT>
  <FINAL_DATE>20080731095516</FINAL_DATE>
  <EVT>mt_nok</EVT>
  <REASON>2010</REASON>
  <MESSAGE_COUNT>1</MESSAGE_COUNT>
</PALO>
```

Message has reached the final destination (**EVT==mt_del**)

```
<PALO>
   <BLMJ>a65b9a60-c8c6-46e8-9083-2113e9e98c79</BLMJ>
   <SENDER>0501235467</SENDER>
   <RECIPIENT>+972507124895</RECIPIENT>
   <FINAL_DATE>20080803123145</FINAL_DATE>
   <EVT>mt_del</EVT>
   <REASON>1000</REASON>
   <MESSAGE_COUNT>1</MESSAGE_COUNT>
</PALO>
```

All attempts to deliver the SMS have failed (**EVT==mt_rej**)

```
<PALO>
   <BLMJ>d7e78097-4565-4893-8ab9-e47f4306fb87</BLMJ>
   <SENDER>0501234567</SENDER>
   <RECIPIENT>+972501234567</RECIPIENT>
   <FINAL_DATE>20080731095516</FINAL_DATE>
   <EVT>mt_rej</EVT>
   <REASON>2010</REASON>
   <MESSAGE_COUNT>1</MESSAGE_COUNT>
</PALO>
```

2.4.6 Specification of the Progress-of-Delivery Reports

Tracking Reports are delivered using HTTP to port 80 of the URL(s) specified in the original SMS. The body of HTTP has the following XML attributes

Table 7 Attributes of SMS Progress-of-Delivery Report

Attribute	Description
BLMJ	The value returned in **HTTP 200 OK** Response in the **SESSION** parameter (See Session in Table 3)
SENDER	The “SENDER” attribute used by CP in the original request to send SMS
RECIPIENT	The “TO” attribute used by CP in the original request to send SMS
FINAL_DATE	The date and time as reported by the SMSC. Format: yyyy-mm-dd-hh-mm-ss
EVT	Success/failure indicators (mt_xxx) as defined in Table 4
REASON	SMPP Code provided by SMSC to LA – See Table 11
MESSAGE_COUNT	

3 Sending Voice Message

3.1 Introduction

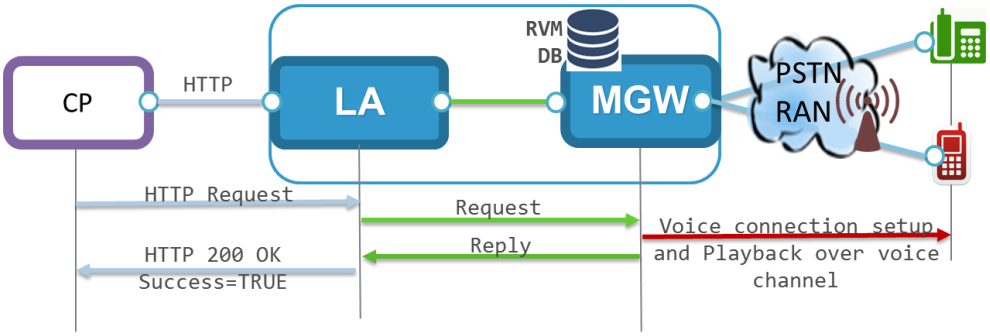
Voice Message (**VM**) feature allows CP App developer to enhance its application with one-way voice connections to recipient's phone. In particular, it activates the following voice telephony features:

- Reaching and Alerting the designated recipient (s)
- Retrying attempts to reach each recipient on the list (up to the specified number of times), while pausing between the retries (for the specified period)
- Playout of the message. The message could be either prerecorded(RVM) or provided as a text (TTS)
- Optionally tracking failure/success of each call and invoking dedicated web-service callbacks (or sending email to the designated address)

The following is brief walkthrough of the chain of events:

1. An Application makes a POST request that:
   a. identifies the caller
   b. provides the ID of VM or text to be converted to speech
   c. lists the recipients
   d. specifies control parameters
2. LA confirms the validity of the request (in particular that the caller's account owns the specified RVM) and schedules the setup of dial-up connection(s)
3. In due time – LA asks the MGW to establish voice connection with each subscriber on the list and provides it with the RVM file to be played or text to be converted to speech. It indicates to the MGW the number of retries and the duration of pause (between the retries).
4. Optionally, LA forwards success/failure reports to the specified email and/or URL using method and format described in Section 2.4.4

Figure 4 Simplified flow of RVM delivery to subscriber



3.2 General Notes

3.2.1 Method and Endpoints

The following applies to both RVM and TTS:

- Only **POST** method can be used to delivery VM.
- The <**CMD**> attribute in the **Header** must be set to **sendivr**
- The endpoints of the API for HTTP and HTTPS are:

//la.cellactpro.com/unistart5.asp

3.2.2 RVM vs. TTS:

- **RVM** is specified by means of <**LINK**> attribute in the **Body**
- **TTS** is specified by means of <**CONTENT**> attribute in the **Body**

3.2.3 Retries

The service is activated at the specified TimeToSend time. The system uses up to three retries to reach a recipient . The retries are scheduled at the following intervals (relative to the specified TimeToSend):

- TimeToSend +15,
- TimeToSend +15+30
- TimeToSend +15+30+30

3.2.4 MSISDN of the Sender

The National Regulator requires that each voice call carries the MSISDN of the originator so that the recipient can add the caller into its spam-list or return to the caller and ask to be removed from the distribution list.

The "**Sender**" attribute is handled differently by RVM and TTS

- RVM – Sender has to be MSISDN owned by Cellact. The value is not associated with the account of the account that makes the API call.
- TTS – Sender's field is not used. Instead, the System inserts the IVR MSISDN that is associated with the account that makes the API call

3.3 Sending RVM

3.3.1 Example

In the following example, an Application asks to deliver the recorded message(#17)to three subscribers. The progress of the message playback must be reported to both email address and the specified application and shall include the specified <MSG_ID>

```
<PALO>
  <HEAD>
      <FROM>company name</FROM>
      <APP USER="username" PASSWORD="123456">LA</APP>
      <CMD>sendivr</CMD>
      <CONF_LIST>
```

```
        <TO TECH="post">https://xxx.net/page.asp</TO>
        <TO TECH="email">rvm-17@cellact.com</TO>
    </CONF_LIST>
  </HEAD>
  <BODY>
    <SENDER>0557XXXXXXX</SENDER>
    <LINK>0b665aff-4e04-4a35-a59c-30966c55e90e</LINK>
    <DEST_LIST>
        <TO>+972506501020</TO>
        <TO>+972506501021</TO>
        <TO>+972506501022</TO>
    </DEST_LIST>
  </BODY>
  <OPTIONAL>
    <MSG_ID>1123528</MSG_ID>
  </OPTIONAL>
</PALO>
```

3.3.2 Specification of the Request

Table 8 Parameters of sendivr-RVM

Attribute	M/O	Value and Description	
PALO	M	The root tag of the XML request.	
Parameters in the HEAD Section			
FROM	M	Name of the Account	
USER	M	Credentials of the representative of the Account	
PASSWORD	M		
APP	M	**LA**	Used by LA Server to route the request to the processing assigned to handle this message
CMD	M	**sendivr**	
TTS	O	Time To Send. (Optional) Unit: minutes relative to the time of the request. Max: 10080 (7 days). Specifies the designated time of delivery relative to the current time.	
CONF_LIST	O	See 2.4.3	
Parameters in the BODY Section			
SENDER	M	MSISDN Number owned by Cellact	
LINK	M	ID of the recorded message. The ID appears in mEnterprise Recording Management tool after uploading the recording file.	
DEST_LIST	M	List of Destination phone numbers. Each number is enclosed in <TO> </TO> frame.	
Parameters in the OPTIONAL Section			
MSG_ID	**O**	**Optional**. An identifier provided by the caller.	
SERVICE_NAME	**O**		

		Not used by LA. However, it is copied by LA into all follow-up messages triggered by this request.

3.3.3 Specification of the Response

See Section 2.3.4

3.3.4 Specification of the Progress-of-Delivery Reports

Please see Table 5 Timeline and Value of Progress Reports" for the example of the progress reports.

Please see Section 2.4.6 for the specification of the report formats.

3.4 Sending TTS

3.4.1 Example

In the following example, an Application asks to convert the specified message ("Winter is coming") to a voice message and deliver it to three subscribers. The progress of the message playback must be reported to both email address and the specified application and shall include the specified <MSG_ID>

```
<PALO>
  <HEAD>
      <FROM>company name</FROM>
      <APP USER="username" PASSWORD="123456">LA</APP>
      <CMD>sendivr</CMD>
      <CONF_LIST>
          <TO TECH="post">https://xxx.net/page.asp</TO>
          <TO TECH="email">rvm-17@cellact.com</TO>
      </CONF_LIST>
  </HEAD>
  <BODY>
      <SENDER></SENDER>
      <CONTENT VOICE="M" RATE='-3'>Winter is
coming</CONTENT>
      <DEST_LIST>
          <TO>+972506501020</TO>
          <TO>+972506501021</TO>
          <TO>+972506501022</TO>
      </DEST_LIST>
  </BODY>
  <OPTIONAL>
      <MSG_ID>1123528</MSG_ID>
  </OPTIONAL>
</PALO>
```

3.4.2 Specification of the Request

Table 9 Parameters of sendivr-TTS

Attribute	M/O	Value and Description
PALO	M	The root tag of the XML request.
Parameters in the HEAD Section		
FROM	M	See Table 8
USER	M	
PASSWORD	M	
APP	M	
CMD	M	
TTS	O	
CONF_LIST	O	
Parameters in the BODY Section		
SENDER	o	Ignored by the System. In the dial-up connection to each recipient, the "Sender" is set to the MSISDN (of type IVR) that is associated with the account of the **USER**
CONTENT	M	The content of the message that is converted to speech. Up to 800 chars.
VOICE attribute	o	Defines the voice of the message: M = male, F = female
RATE attribute	o	Defines the reading rate. Default rate is 0; 1 to 5 = faster rate; -1 to -5 = slower rate
DEST_LIST	M	List of Destination phone numbers. Each number is enclosed in <TO> </TO> frame.
Parameters in the OPTIONAL Section		
MSG_ID	**O**	See Table 8
SERVICE_NAME	**O**	

3.4.3 Specification of the Response

See Section 3.4.3

3.4.4 Specification of the Progress-of-Delivery Reports

. See Section 3.4.4

4 Handling SMS from Subscriber

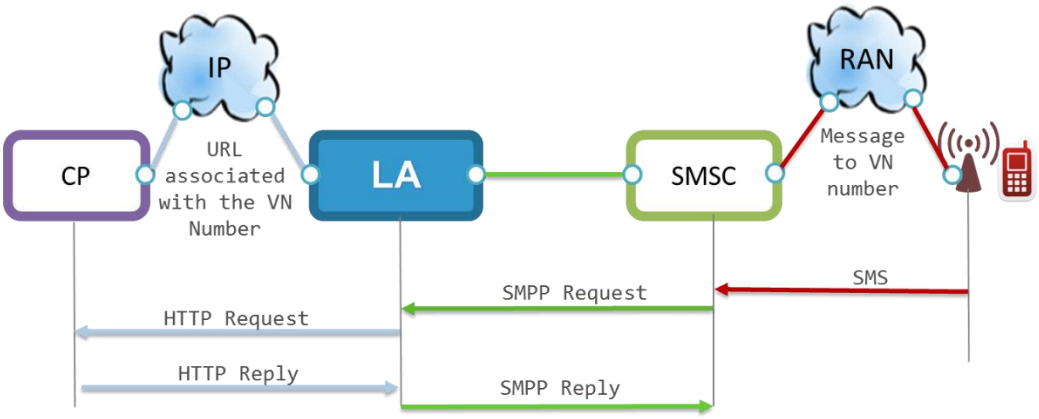
4.1 Introduction

LA Web Service allows CP App developers to integrate into their application reception of SMS originated from subscribers and sent to numbers associated with the CP and its applications ("Virtual Numbers (**VN**)").

The following is brief description of the required infrastructure and processes that handle delivery of SMS to CP's URL:

1. Virtual Numbers are assigned in the National Numbering Scheme to LA. Therefore, SMS destined to such number is forwarded by SMSC of Network Operators to the LA
2. LA inspects its routing table and associates the destination number with the corresponding URL of the CP.
3. Finally, LA applies the specified method (HTTP/POST or HTTP/GET) to invoke the URL while mapping the content of the SMS and its attributes into the body of the HTTP request

Figure 5 delivery of SMS to the corresponding URL



4.2 HTTP/GET

4.2.1 Endpoints

The URL in the endpoint mapping table (VN -> URL) is provided by CP that owns the VN.

4.2.2 Example

```
http://content provider url/xxx.asp?blmj=b21bc802-f28e-4962-9b1e-c0cec0948208&sender=%2B972523978686&recipient=055700081&content=hello%20world&net=GSM&device model=NOKIA6120&op=97252&date=20100513151701
```

4.2.3 Specification of the Request

Attribute	Description
blmj	Billing Major – identifier generated by SMSC and provided to CP for coordination of messages associated with the SMS delivery
sender	MSISDN number of the sender
recipient	Virtual Number associated with service provided by CP
content	The content of the message composed by the subscriber. Characters are provided in UTF-8 – Unicode format
device model	Type of device that originated the SMS
op	International code of operator that originated the message (e.g., 97252 for 052)
date	yyyy-mm-dd-hh-mm-ss

4.3 HTTP/POST

4.3.1 Endpoints

The URL in the endpoint mapping table (VN -> URL) is provided by CP that owns the VN.

4.3.2 Example

```
<PALO>
   <HEAD>
      <BLMJ>de20e16a-fc07-426f-9c9a-be1881641814</BLMJ>
      <CMD>1</CMD>
      <COMPANY>visacalRAM</COMPANY>
   </HEAD>
   <BODY>
      <SENDER OP="97254" >+972545565334</SENDER>
      <CONTENT>1</CONTENT>
      <DEST_LIST>
         <TO>+972557000988</TO>
      </DEST_LIST>
   </BODY>
   <OTHER>
      <EVT>mo</EVT>
      <DATE>20160927130326</DATE>
      <CP_MO>cellact_communications</CP_MO>
   </OTHER>
</PALO>
```

4.3.3 Specification of the Request

Table 10: Parameters for the MO POST

Attribute	Description
PALO	The root tag of the XML request.
Parameters in the HEAD Section	
BLMJ	Billing Major – identifier generated by SMSC and provided to CP for coordination of messages associated with the SMS delivery
CMD	

Parameters in the BODY Section	
SENDER	MSISDN of the sender
CONTENT	The content of the message composed by the subscriber. Characters are provided in UTF-8 – Unicode format
TO	Virtual Number associated with service provided by CP

5 Appendix

Table 11 Values of <REASON>

REASON	Description
1000	Message delivered
1002	Subscriber is unavailable
1003	Message inbox full
1005	Incorrect subscriber number
1101	Registration request parameters are missing/incorrect
1103	Password not authenticated
1104	Subscriber is already registered with this service
1105	Subscriber is not registered with this service
1106	Pending request in process
1107	Internal connection error
1108	System SQL Connection Error
1140	Invalid SIGI / Subscriber is not registered with this service
1141	TRID or SIGI is missing
2006	Destination is blocked to RB messages
2010	Subscriber is blocked
2013	Sender is invalid
2014	Sender from a different operator cannot be charged
2016	Destination does not support the message's type
2018	Unknown link
2020	Spam filter
2050	Subscriber block in Guardian
2060	Number is blocked for SMS reception
3001	Account balance has exceeded
3002	Message contains invalid attributes
3004	Validator Error MNP
3007	in feature – account cannot send messages"Night Block" the predefined hours
4002	system did not recognize message's Tariff Prepaid
5000	Message was delivered to the operator
5001	Operator error
5007	Recipient is temporarily unavailable / Device inbox is full
5014	SQL: System connection error
5016	size exceeded Message
5028	overseas message Error sending
6001	Communication error

REASON	Description
7000	message Subscriber replied to MT
7001	Message not delivered
8000	Wap text message was opened
8018	MMS message rejected
9000	MO message delivered
9005	insufficient balance Subscriber has
9801	Email message was not delivered
9821	Recipient's Server is not available.
9831	Message declined by recipient
9840	Recipient is unavailable / Mail inbox is full
9845	Recipient is Not Found
9850	Invalid Email Address

Table 12 Acronyms

Acronym	Definition
BLMJ	Billing Major – identifier generated by SMSC and provided to CP for coordination with the follow-up messages
CP	Content Provider
EVT	Event
GW	Gateway
IVR	Integrated Voice Recording
LA	Large Account
MGW	Media Gateway
MO	Mobile Originated (session)
M/O	Mandatory / Optional
MT	1. Mobile Terminated (session) 2. Message Type
PSTN	Public Subscriber Telephony Network (wireline telephony)
RAN	Radio Access Network (wireless telephony)
RVM	Recorded Voice Message

SMS	Short Message Service
SMSC	Short Message Service Component (network)
SMPP	Short Message Protocol
TTL	Time To Live
TTS	1. Text To Speech 2. Time To Send (relative to the time of the request)
VM	Voice Message
VN	Virtual Number

Contacting Cellact

.

Contact us at: mailto:support@cellact.com

Phone: +972-9-9704181

Cellact Ltd.

Shefayim Business Center

P.O. Box 286

Shefayim 60990 Israel

Tel: +972-9-970-4110

Fax: +972-9-970-4210

Visit our website:

http://www.cellact.com or http://www.cellact.co.il