OPERATOR SERVICE PLATFORM

OMA Messaging REST API Guide

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Revision History

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1.0	An initial release containing Release 1 scope of MT bulk messagingservice (send, read status and notifications).	December 17, 2014
1.1	Legal text updated.	April 15, 2015
2.0	Updated for Release 2, scope extended to MO messaging service (retrieve and delete, and notification), and for MT messaging serviceto include binary and flash messages and charging elements (Premium SMS). New policy codes added.	June 18, 2015
3.0	Updated for Release 3, Authorization type changed from Basic toBearer in all examples, URLs updated, expired token example added in section 5.3.	September 15, 2015
4.0	Applied template and changed legal and copyright information fromthe PDF shared by Ray.	November 26, 2015
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6.6	ASFTS 117 and ASFTS 124	June 15, 2016
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8.1	R4 related changes	Sep 7, 2016
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Revision History

8.6	Updated for TS-3347 - MT Binary Data is corrupted when "SMS-DCS: 0x00" is specified	April 1, 2019
8.7	Updated for CR0021 which for PSD compliance of Opaali platform	July 25, 2019
8.8	Updated for CR0024 org_unit header	Dec 17 2019
8.8.1	Copyright year changed to 2022	May 20, 2022
8.8.2	Updated the Policy Exceptions section (Table 29) by adding new Error Code POL0252 which is introduced with CR034. Updated Copyright Year to 2023	May 29, 2023
8.8.3	Updated the Policy Exceptions section (Table 29) by adding new Error Code POL3020 & POL3019 which is introduced with CR038.	

Contents

1 Messaging REST Overview

The Telia-OMA Messaging RESTful interface allows an application to send and receive messages, read their delivery status, and have a notification sent about their delivery status. You implement the API based on the following OMA specifications.

- *OMA-TS-REST_NetAPI_Common-V1_0-20120417-C.pdf*
- *OMA-TS-REST_NetAPI_Messaging-V1_0-20130709-C.pdf*

1.1 Methods and Scope

This API Guide contains descriptions of the following SMS resources:

- Inbound messages - retrieve and delete messages from the gateway storage
- Outbound message requests – create new outbound message requests including Binary and Flash messaging, and charging elements
- Outbound message delivery status – read delivery status for an outbound message request
- Client notification about inbound and outbound message delivery status

Section 2.3 describes the restrictions which apply to certain elements.

1.2 Authentication

Operator Service Platform (OSP) supports one-way, server-side SSL, enabling HTTPS access sessions with a server-side certificate loaded on OSP. It does not support two-way SSL.

OSP requires an access token, inserted in the Authorization request header field with the Bearer authorization scheme, as shown here and in the examples throughout this document.

```
Authorization: Bearer <token value>
```

You can obtain the access token by calling the OMA Authorization API, as described in the *API_Telia-OMA_OAuth-REST.pdf*.

NOTE: APIs of OSP support chunked transfer coding (*Resource-ref: HTTP 1.1 specification: ftp://ftp.isi.edu/in-notes/rfc2616.txt*) in line with HTTP 1.1 protocol.

NOTE: OSP supports basic authentication for a limited period to allow for backwards compatibility. In the long run, it only supports token-based authentication.

1.3 Using HTTP Headers

NSEE implements a number of HTTP headers which may (optionally) be present for SMS operation types. This section describes the headers and the operation for which you use them. Use of the headers in operations other than those described here have no effect.

1.3.1 SMS-Charset

This header applies to the following Outbound SMS messages:

- `OutboundSMSTextMessage`
- `OutboundSMSFlashMessage`

NSEE supports extended characters (such as Cyrillic) by encoding the MT-SMS using UCS-2. You can identify this in the HTTP header of the API request, from the application as follows:

```
sms-charset: UCS-2
```

See Supported Character Sets.

1.3.2 Message-Segment-Count

This header applies to the following Inbound messages:

- `InboundSMSTextMessage`
- `InboundSMSBase64Message`

This header indicates to the Partner Application about the number of SMS segments required to deliver a message to NSEE.

1.3.3 SMS-DCS

This header applies to the following Outbound messages:

- `OutboundSMSBinaryMessage`

  This header indicates the Data Coding Scheme value to present to SMSC. The value is copied unchanged to the SMPP `data_coding` element.

NOTE: If you specify a DCS value that indicates a text format (such as GSM 7 bit default alphabet) the SMPP layer may treat your data as text content and perform character conversion and packing of the 7-bit characters on it.

1.3.4 SMS-PID

This header applies to the following Outbound messages for the Partner:

- `OutboundSMSBinaryMessage`

This header indicates the Protocol ID value to present to SMSC. The value is copied unchanged to the SMPP `protocol_id` element.

1.3.5 SMS-Validity

This header applies to the following Outbound messages for the Partner:

- `OutboundSMSBinaryMessage`
- `OutboundSMSTextMessage`
- `OutboundSMSFlashMessage`

These headers indicate the validity period for the message, in minutes.

The application converts the value to relative time and submits it in the SMPP `VALIDITY_PERIOD` element. The relative time is as defined in the SMPP v3.4 Section 7.1.1.2 and is in the following format:

```
YYMMDDhhmmss000R
```

Where,

Name	Description
YY	The number of years
MM	The number of months
DD	The number of days
hh	The number of hours
mm	The number of minutes
ss	The number of seconds (should always = 00)

NOTE: If the Partner Application uses Charge on Delivery, you can set the application attribute `VALIDITY_PERIOD`. If Charge on Delivery is set and includes `VALIDITY_PERIOD` and `SMS-Validity` attributes, then `SMS-Validity` takes precedence.

1.3.6 ORG_UNIT

This is an optional http header accepted in messaging API. Messaging transactions are counted for given header value and presented as a summary report in portal. Special characters such as Finish, and Cyrillic are not accepted.

```
POST
https://api.opaali.telia.fi/production/messaging/v1/outbound/tel%3
A%2B358405005900/requests HTTP/1.1
Host: example-host:8181
Content-type: application/json
Accept: application/json
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b
ORG_UNIT: Finance
Content-Length: 188

{"outboundMessageRequest":{
"address":["tel:+358405005387","tel:+358405005987","tel:+358405005
988","tel:+358405005989"],
"senderAddress":"tel:+358405005900",
"outboundSMSBinaryMessage":{"message":"BgUEAAAASGVsbG8gdGhlcmU="},
"senderName":"Telia",
"receiptRequest":  {
      "notifyURL": "https://<hostname>:<port>/<application
notification endpoint>",
      "notificationFormat":"JSON"}   }
}
```

1.3.7 TRX_REF

This is an optional http header accepted in messaging API. Applications can use this header to attach internal transaction id to the request. Special characters such as Finish, and Cyrillic are not accepted. The value of the header is recorded in reporting server.

```
POST
https://api.opaali.telia.fi/production/messaging/v1/outbound/tel%3
A%2B358405005900/requests HTTP/1.1
Host: example-host:8181
Content-type: application/json
Accept: application/json
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b
TRX_REF: CompanyX_124fgh566
```

```
Content-Length: 188

{"outboundMessageRequest":{
"address":["tel:+358405005387","tel:+358405005987","tel:+358405005
988","tel:+358405005989"],
"senderAddress":"tel:+358405005900",
"outboundSMSBinaryMessage":{"message":"BgUEAAAASGVsbG8gdGhlcmU="},
"senderName":"Telia",
"receiptRequest":  {
      "notifyURL": "https://<hostname>:<port>/<application
notification endpoint>",
      "notificationFormat":"JSON"}   }
}
```

2 Resource Summary

2.1 URI and Operations List

The URIs of the resources are as follows:

- Inbound messages Mobile Originated (MO) SMS (MO-SMS)
  - ➢ Retrieve and delete inbound messages – section 3.1

    POST
    https://api.opaali.telia.fi/production/messaging/{apiVersion}/inbound/{registrationId}/messages/retrieveAndDeleteMessages
- Outbound messages Mobile Terminated (MT) SMS (MT- SMS)
  - ➢ Create new outbound message request – section 4.1

    POST

    https://api.opaali.telia.fi/production/messaging/{apiVersion}/outbound/{senderAddress}/requests
  - ➢ Read delivery status of an outbound message request – section 4.1.2

    GET

    https://api.opaali.telia.fi/production/messaging/{apiVersion}/outbound/{senderAddress}/requests/{requestId}/deliveryInfos

Client notifications –

- MO message receipt notification is sent to the client by the server. The format of the notification is described in section 0

  The notifications are set up from the Opaali Portal. The steps are described in Appendix A Starting and Stopping Notifications.
- MT message delivery status notification is sent to the client by the server. The mechanism and the format of the notification are described in section 4.3

2.2 URI Variables

The variables used in the URIs are described in Table 1.

Table 1 URI Variables

Name	Description
{apiVersion}	A version of the API that the client chooses to use. In this case *v1*.
{registrationId}	The unique reference ID for the notification set up from the Portal for MO message arrivals on the portal.

Resource Summary

Name	Description
	The value is displayed for each notification. See Appendix A.
{requestId}	The outbound message request ID generated by the server.
{senderAddress}	Typically the short code which identifies the client application. If this is used as a parameter in the request body, the values must match.

2.3 Restrictions

The following restrictions apply to Telia-OMA Messaging API.

Table 2 Restrictions

Parameter/element	Restriction
address (in send message operations)	Only *tel:* URI is allowed, which must be in international format beginning with + , followed by a minimum 9 digits including the country code. For example, tel:+358123456. Numbers without any prefix are rejected. *sip:, acr:* and *short:* URIs are not supported.
destination address count (in send message operations)	A maximum count may be enforced on the number of destination addresses that a single request can include.
senderAddress (in send message operations)	Only tel: URIs and short codes are allowed. The tel: URI must be in international format beginning with +, followed by a minimum 9 digits including the country code. The short code may have *short*: prefix and are a minimum of 3 digits
short code	Short code length must have a minimum of 3 digits.

Violations of these rules result in an exception being returned. See Response Codes and Exceptions for details of error codes and exceptions.

2.4 Format Requirement

The Telia-OMA Messaging API supports JSON and XML content types only, for both request and response message bodies.

Throughout this document, the URL examples containing addresses may be shown WITHOUT URL encoding for readability purposes, e.g. URL encoding for `':'` and `'+'` are `%3A` and `%2B` respectively. Therefore, in the URL examples, `tel:+ 1234567890` may be shown instead of `"tel%3A%2B1234567890"`.

2.5 Supported Character Sets

By default, the Telia-OMA Messaging API supports Latin 9 alphabet by default, which includes Finnish characters and the Euro symbol (€).

To use Cyrillic characters, add the `sms-charset` HTTP header with value as UCS-2 in the API request. See also SMS-Charset. For example,

```
Content-type: application/xml
Accept: application/xml
sms-charset: UCS-2
{"outboundMessageRequest":{
"address":["tel:+35842345002"],
"senderAddress":"tel:+35842340001",
"outboundSMSTextMessage":{"message":"Test Cyrillic - чррхоей
фхтиеъгн пвгжайфн"},
"senderName":"Telia"}}
```

2.6 Parameter Data Structures

Parameters sent in the body of the message are contained in a defined data structure, some of which are nested doubly or triply within other layers of data structure. These structures are noted by their Type, and parameters are described per data structure type, in separate tables.

For example, in the Request message sample at section 4.1.1.1 below, the top level structure *outboundSMSMessageRequest* contains a number of simple elements as well as two objects each of which contains one or more sub-elements*:*

`outboundSMSMessageRequest` - top level structure –Table 15

- element a
- element b
- element …

- `outboundSMSTextMessage` – second level structure - Table 16
  - element x

- `receiptRequest` – second level structure - Table 17
  - element y
  - element z

Therefore in this case, direct elements of the primary structure, including the secondary structures, are presented in Table 3; and elements of the respective secondary-structures are described in Table 4 and Table 5.

3 Inbound Messages

3.1 Retrieve and Delete Inbound Messages

The POST operation allows you to retrieve MO SMSs on the gateway identified by the registration ID, and to immediately delete those that are retrieved:

POST

https://api.opaali.telia.fi/production/messaging/v1/inbound/registrations/{registrationId}/messages/retrieveAndDeleteMessages

The value for registration ID should be the notification ID value displayed on the Opaali Portal, associated uniquely with each notification set up for the specific pair of keyword and number. See Appendix A on the steps to set up a notification. The format of the notification is in section 3.2.1.

3.1.1 Request

Example JSON request:

```
POST
https://api.opaali.telia.fi/production/messaging/v1/inbound/registrations/822c82991bd145e493a3690e871800e2/messages/retrieveAndDeleteMessages
Connection: close
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b

Content-type: application/json
Accept: application/json

{"inboundMessageRetrieveAndDeleteRequest":{
   "retrievalOrder":"OldestFirst",
   "useAttachmentURLs":"true"}
}
```

Example XML request:

```
POST
https://api.opaali.telia.fi/production/messaging/v1/inbound/registrations/822c82991bd145e493a3690e871800e2/messages/retrieveAndDeleteMessages
Connection: close
```

Inbound Messages

```
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b
Content-type: application/xml
Accept: application/xml
<?xml version="1.0" encoding="UTF-8"?>
<msg:inboundMessageRetrieveAndDeleteRequest>
  <retrievalOrder>OldestFirst</retrievalOrder>
  <useAttachmentURLs>true</useAttachmentURLs>
</inboundMessageRetrievAndDeleteRequest>
```

3.1.2 Request Parameters

Table 3 Retrieve and Delete Inbound SMS - Request Parameters (InboundMessageRetrieveAndDeleteRequest Type)

Parameter	Data Type	Description	Optional
`maxBatchSize`	`integer`	The maximum number of messages to return in the response.	Yes
`priority`	`MessagePriority`	The priority of the message. Defaults to Normal.	Yes
`retrievalOrder`	`RetrievalOrder`	Specifies the order in which to retrieve messages, if there are more than one pending.	Yes
`useAttachmentURLs`	`boolean`	useAttachmentURLs must be set to 'TRUE. When set to 'true', inbound messages have links to attachments together with the indication of the content type, and optionally the size of each attachment.	No

3.1.3 Response

Example JSON response:

```
HTTP/1.1 200 OK
accept: application/json
content-type: application/json; charset=UTF-8
date: Tue, 19 Dec 2017 06:48:35 GMT
expect: 100-continue
message-segment-count: 1, 1
server: Operator Service Platform
Content-Length: 1169

{
  "inboundMessageList" : {
    "inboundMessage" : [ {
```

Inbound Messages


```
      "destinationAddress" : "13333",
      "senderAddress" : "tel:+358401767253",
      "dateTime" : "2017-12-19T06:47:52.000+0000",
      "resourceURL" :
"https://api.opaali.telia.fi/production/messaging/v1/inbound/regis
trations/a48401bf-9f11-44dc-bdfc-
de9bee1dd667/messages/retrieveAndDeleteMessages/24532128",
      "messageId" : "24532128",
      "inboundSMSTextMessage" : {
        "message" : "test"
      }
    }, {
      "destinationAddress" : "13333",
      "senderAddress" : "tel:+358401767253",
      "dateTime" : "2017-12-19T06:48:24.000+0000",
      "resourceURL" :
"https://api.opaali.telia.fi/production/messaging/v1/inbound/regis
trations/a48401bf-9f11-44dc-bdfc-
de9bee1dd667/messages/retrieveAndDeleteMessages/24532140",
      "messageId" : "24532140",
      "inboundSMSTextMessage" : {
        "message" : "test1"
      }
    } ],
    "totalNumberOfPendingMessages" : 0,
    "numberOfMessagesInThisBatch" : 2,
    "resourceURL" :
"https://api.opaali.telia.fi/production/messaging/v1/inbound/regis
trations/a48401bf-9f11-44dc-bdfc-
de9bee1dd667/messages/retrieveAndDeleteMessages"
  }
}
```


Example XML response:


```
HTTP/1.1 200 OK
accept: application/xml
content-type: application/xml; charset=UTF-8
date: Tue, 19 Dec 2017 06:51:37 GMT
expect: 100-continue
message-segment-count: 1, 1
server: Operator Service Platform
Content-Length: 1616

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
```

Inbound Messages

```
<msg:inboundMessageList
xmlns:msg="urn:oma:xml:rest:netapi:messaging:1"
xmlns:common="urn:oma:xml:rest:netapi:common:1">
    <inboundMessage>
        <destinationAddress>13333</destinationAddress>
        <senderAddress>tel:+358401767253</senderAddress>
        <dateTime>2017-12-19T08:51:20.000+02:00</dateTime>
<resourceURL>https://api.opaali.telia.fi/production/messaging/v1/i
nbound/registrations/a48401bf-9f11-44dc-bdfc-
de9bee1dd667/messages/retrieveAndDeleteMessages/24532168</resource
URL>
        <messageId>24532168</messageId>
        <inboundSMSTextMessage>
            <message>test3</message>
        </inboundSMSTextMessage>
    </inboundMessage>
    <inboundMessage>
        <destinationAddress>13333</destinationAddress>
        <senderAddress>tel:+358401767253</senderAddress>
        <dateTime>2017-12-19T08:51:30.000+02:00</dateTime>
<resourceURL>https://api.opaali.telia.fi/production/messaging/v1/i
nbound/registrations/a48401bf-9f11-44dc-bdfc-
de9bee1dd667/messages/retrieveAndDeleteMessages/24532172</resource
URL>
        <messageId>24532172</messageId>
        <inboundSMSTextMessage>
            <message>test4</message>
        </inboundSMSTextMessage>
    </inboundMessage>
    <totalNumberOfPendingMessages>0</totalNumberOfPendingMessages>
    <numberOfMessagesInThisBatch>2</numberOfMessagesInThisBatch>
<resourceURL>https://api.opaali.telia.fi/production/messaging/v1/i
nbound/registrations/a48401bf-9f11-44dc-bdfc-
de9bee1dd667/messages/retrieveAndDeleteMessages</resourceURL>
</msg:inboundMessageList>
```

3.1.4 Response Parameters

Table 4 Retrieve and Delete Inbound SMS - Response Parameters (InboundMessageList Type)

Parameter	Data Type	Description	Optional
`inboundMessage`	`InboundMessage`	An array of inboundMessage elements. See Table 5.	Yes

Inbound Messages

Parameter	Data Type	Description	Optional
numberOfMessagesInThisBatch	integer	The number of messages included in the response.	Yes
resourceURL	anyURI	Self-referring URL.	No
totalNumberOfPendingMessages	integer	The total number of messages in the gateway storage waiting for retrieval at the time of the request.	Yes

Table 5 Retrieve and Delete Inbound SMS - Response Parameters (InboundMessage Type)

Parameter	Data Type	Description	Optional
dateTime	dateTime	The date and time when the message is received by the operator.	Yes
destinationAddress	anyURI	The destination address used by the terminal to send the MO message.	No
inboundMMSMessage	InboundMMSMessage	The Inbound MMS message.	choice
inboundSMSBase64Message	inboundSMSBase64Message	The Inbound SMS Binary message.	choice
inboundSMSTextMessage	inboundSMSTextMessage	The SMS text message.	choice
messageId	string	Server generated message identifier.	Yes
resourceURL	anyURI	Self-referring URL. Not present, as the message is deleted.	Yes
senderAddress	anyURI	The address of the sender of the MO message.	No

XSD modelling uses a "*choice*" to select either `inboundSMSTextMessage`, or `inboundMMSMessage` or `inboundSMSBase64Message`.

The element which are present in the parameters '`inboundSMSTextMessage'`,' `inboundSMSBase64Message'` and '`inboundMMSMessage'` are as shown in the following tables.

Table 6 InboundSMSTextMessage Type

Parameter	Data Type	Description	Optional
message	xsd:string	A short message content.	No

Inbound Messages

Table 7 InboundSMSBase64Message Type (parameters for an inbound SMS binary message)

Parameter	Data Type	Description	Optional
`dataCoding`	`xsd:int`	The coding scheme associated with the message. Copied from the `data_coding` parameter in received SMPP PDU.	No
`destinationPort`	`xsd:int`	The application port number associated with the destination address of the message. Copied from the `destination_port` parameter in received SMPP PDU if present.	Yes
`message`	`xsd:base64Binary`	A short message content. Copied from the `message_payload` parameter in received SMPP PDU if present, including the UDH content. Encoded into base64 format before delivery.	Yes
`sourcePort`	`xsd:int`	The application port number associated with the source address of the message. Copied from the `source_port` parameter in received SMPP PDU if present.	Yes

NOTE: The ‘`message`’ element is optional. Whilst this is unlikely, this reflects that the ‘`message_payload`’ is an optional parameter in the SMPP PDU.

Table 8 InboundMMSMessage Type (parameters for an inbound MMS message)

Parameter	Data Type	Description	Optional
`attachment`	`AttachmentInfo` `[0…unbounded]`	Information about individual attachments, including content type indication, the link for individual attachment retrieval and optionally the size of the attachment. In case the message contains a presentation part, this SHALL be referenced by the first item in the list of attachment elements.	Yes
`bodyText`	`xsd:string`	Contains the message body if it is encoded as ASCII text.	Yes
`priority`	`MessagePriority`	The priority of the message: default is Normal.	Yes
`subject`	`xsd:string`	If present, indicates the subject of the received message.	Yes

3.2 Notify Client About Inbound Message Arrival

Notifications can be sent from the server to the client callback URL configured for a given set of notification criteria (shortcode and keyword) on the Opaali Portal.

Starting and stopping notifications is carried out through the Portal. See Appendix A.

3.2.1 Notification Format

This section gives example of notification format (Notify Client – Request).

```
POST
https://<hostname>:<port>/<application notification endpoint>
HTTP/1.1
Content-Type: application/json; charset=UTF-8
Accept: application/json
message-segment-count: 1
Host: <hostname>:<port>
Transfer-Encoding: chunked

{
  "inboundMessageNotification" : {
    "inboundMessage" : {
      "destinationAddress" : "80000",
      "senderAddress" : "tel:+35842348001",
      "dateTime" : "2015-02-13T16:15:02.000+0000",
      "resourceURL" :
"https://api.opaali.telia.fi/production/v1/inbound/registrations/8579a6
8f-45c3-459e-bcd2-67a482e4146e/messages/20317",
      "messageId" : "20317",
      "inboundSMSTextMessage" : {
        "message" : "qrshared FN-QR-01 - Autoframing"
      }
    }
  }
}
```

There is one notification for every SMS received matching the notification criteria.

3.2.2 Request Parameters

Table 9 Notify Client about Inbound Message Arrival - Request Parameters (InboundMessageNotification Type)

Parameter	Data Type	Description	Optional
inboundMessage	InboundMessage	The inbound message containing elements listed in Table 5.	No

3.2.3 Response

The client application should return HTTP 204 – No Content.

```
HTTP/1.1 204 No Content
Date: Fri, 26 Sept 2014 02:51:59 GMT
```

3.2.4 Response Parameters

Not Applicable

3.3 Notify Client About Inbound MMS Message Arrival

3.3.1 Notification Format

This section gives example of notification format (Notify Client – Request).

```
POST
https://<hostname>:<port>/<application notification endpoint>
HTTP/1.1
Content-Type: application/json; charset=UTF-8
Accept: application/json
message-segment-count: 1
Host: <hostname>:<port>
Transfer-Encoding: chunked

{
  "inboundMessageNotification" : {
    "inboundMessage" : {
```

Inbound Messages

```
      "destinationAddress" : "1695",
      "senderAddress" : "tel:+919825019998",
      "dateTime" : "2015-08-01T09:50:43.000+0000",
      "resourceURL" :
"https://api.opaali.telia.fi/production/messaging/v1/inbound/regis
trations/5033233e-7516-496a-be38-c24c07269cb4/messages/1047",
      "messageId" : "1047",
      "inboundMMSMessage" : {
        "subject" : "KKK hello",
        "priority" : "Normal",
        "attachment" : [ {
          "contentType" : "text",
          "link" : {
            "rel" : "attachment",
            "href" :
"https://api.opaali.telia.fi/production/messaging/v1/inbound/regis
trations/5033233e-7516-496a-be38-
c24c07269cb4/messages/1047/attachments/1049"
          }
        } ]
      }
    }
  }
}
```

There is one notification for every SMS received matching the notification criteria.

3.3.2 Request Parameters

Table 10 Notify Client about Inbound Message Arrival - Request Parameters (InboundMessageNotification Type)

Parameter	Data Type	Description	Optional
`inboundMessage`	`InboundMessage`	The inbound message containing elements listed in Table 5.	No

3.3.3 Response

The client application should return HTTP 204 – No Content.

```
HTTP/1.1 204 No Content
Date: Fri, 26 Sept 2014 02:51:59 GMT
```

3.3.4 Response Parameters

Not Applicable

3.4 Retrieve and Delete Inbound MMS Messages

The POST operation allows you to retrieve MO MMSs on the gateway identified by the registration ID, and to immediately delete those that are retrieved:

3.4.1 Request

Example JSON request:

```
POST
https://api.opaali.telia.fi/production/messaging/v1/inbound/regist
rations/822c82991bd145e493a3690e871800e2/messages/retrieveAndDelet
eMessages
Connection: close
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b

Content-type: application/json
Accept: application/json

{"inboundMessageRetrieveAndDeleteRequest":{
   "retrievalOrder":"OldestFirst",
   "useAttachmentURLs":"true"}
}
```

Example XML request:

```
POST
https://api.opaali.telia.fi/production/messaging/v1/inbound/regist
rations/822c82991bd145e493a3690e871800e2/messages/retrieveAndDelet
eMessages
Connection: close
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b

Content-type: application/xml
Accept: application/xml
<?xml version="1.0" encoding="UTF-8"?>
<msg:inboundMessageRetrieveAndDeleteRequest>
  <retrievalOrder>OldestFirst</retrievalOrder>
  <useAttachmentURLs>true</useAttachmentURLs>
```

```
</inboundMessageRetrievAndDeleteRequest>
```

3.4.2 Request Parameters

Table 11 Retrieve and Delete Inbound MMS - Request Parameters (InboundMessageRetrieveAndDeleteRequest Type)

Parameter	Data Type	Description	Optional
`maxBatchSize`	`integer`	The maximum number of messages to return in the response.	Yes
`priority`	`MessagePriority`	The priority of the message. Defaults to Normal.	Yes
`retrievalOrder`	`RetrievalOrder`	Specifies the order in which to retrieve messages, if there are more than one pending.	Yes
`useAttachmentURLs`	`boolean`	`useAttachmentURLs` must be set to '`TRUE`. When set to 'true', inbound messages have links to attachments together with the indication of the content type, and optionally the size of each attachment.	No

3.4.3 Response

Example JSON response:

```
HTTP/1.1 200 OK
accept: application/json
content-type: application/json; charset=UTF-8
date: Tue, 14 Apr 2015 07:36:40 GMT
expect: 100-continue
message-segment-count: 1
server: Operator Service Platform
Content-Length: 1169

"inboundMessageList": {
    "inboundMessage": [
      {
        "destinationAddress": "1697",
        "senderAddress": "tel:+919825019998",
        "dateTime": "2015-08-01T09:50:43.000+0000",
        "resourceURL":
"https://api.opaali.telia.fi/production/messaging/v1/inbound/regis
trations/50beb7c6-20a9-4115-9ebe-
d10fcdcbb3ad/messages/retrieveAndDeleteMessages/359",
        "messageId": "359",
```

Inbound Messages

```
        "inboundMMSMessage": {
          "subject": "ZZZ hello",
          "priority": "Normal",
          "attachment": [
            {
              "contentType": "text",
              "link": {
                "rel": "attachment",
                "href":
"https://api.opaali.telia.fi/production/messaging/v1/inbound/regis
trations/50beb7c6-20a9-4115-9ebe-
d10fcdcbb3ad/messages/359/attachments/361"
              }
            }
          ]
        }
      }
    ],
    "totalNumberOfPendingMessages": 0,
    "numberOfMessagesInThisBatch": 1,
    "resourceURL":
"https://api.opaali.telia.fi/production/messaging/v1/inbound/regis
trations/50beb7c6-20a9-4115-9ebe-
d10fcdcbb3ad/messages/retrieveAndDeleteMessages"
  }
}
```

Example XML response:

```
HTTP/1.1 200 OK
accept: application/xml
content-type: application/xml; charset=UTF-8
date: Tue, 14 Apr 2015 07:36:40 GMT
expect: 100-continue
message-segment-count: 1
server: Operator Service Platform
Content-Length: 1169

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<msg:inboundMessageList
xmlns:msg="urn:oma:xml:rest:netapi:messaging:1"
xmlns:common="urn:oma:xml:rest:netapi:common:1">
    <inboundMessage>
        <destinationAddress>1697</destinationAddress>
        <senderAddress>tel:+919825019998</senderAddress>
        <dateTime>2015-08-01T15:20:43.000+05:30</dateTime>
```

Inbound Messages

```
<resourceURL>https://api.opaali.telia.fi/production/messaging/v1/inbound/registrations/50beb7c6-20a9-4115-9ebe-d10fcdcbb3ad/messages/retrieveAndDeleteMessages/363</resourceURL>
        <messageId>363</messageId>
        <inboundMMSMessage>
            <subject>ZZZ hello</subject>
            <priority>Normal</priority>
            <attachment>
                <contentType>text</contentType>
                <link rel="attachment" href="https://api.opaali.telia.fi/production/messaging/v1/inbound/registrations/50beb7c6-20a9-4115-9ebe-d10fcdcbb3ad/messages/363/attachments/365"/>
            </attachment>
        </inboundMMSMessage>
    </inboundMessage>
    <totalNumberOfPendingMessages>0</totalNumberOfPendingMessages>
    <numberOfMessagesInThisBatch>1</numberOfMessagesInThisBatch>

<resourceURL>https://api.opaali.telia.fi/production/messaging/v1/inbound/registrations/50beb7c6-20a9-4115-9ebe-d10fcdcbb3ad/messages/retrieveAndDeleteMessages</resourceURL>
</msg:inboundMessageList>
```

3.4.4 Response Parameters

Table 12 Retrieve and Delete Inbound SMS - Response Parameters (InboundMessageList Type)

Parameter	Data Type	Description	Optional
`inboundMessage`	`InboundMessage`	An array of `inboundMessage` elements. See Table 5.	Yes
`numberOfMessagesInThisBatch`	`integer`	The number of messages included in the response.	Yes
`resourceURL`	`anyURI`	Self-referring URL.	No
`totalNumberOfPendingMessages`	`integer`	The total number of messages in the gateway storage waiting for retrieval at the time of the request.	Yes

Table 13 Retrieve and Delete Inbound SMS - Response Parameters (InboundMessage Type)

Parameter	Data Type	Description	Optional
`dateTime`	`dateTime`	The date and time when the message is received by the operator.	Yes

Inbound Messages

Parameter	Data Type	Description	Optional
destinationAddress	anyURI	The destination address used by the terminal to send the MO message.	No
inboundSMSTextMessage	inboundSMSTextMessage	The SMS text message.	No
messageId	string	Server generated message identifier.	Yes
resourceURL	anyURI	Self-referring URL. Not present, as the message is deleted.	Yes
senderAddress	anyURI	The address of the sender of the MO message.	No

3.5 Read an MMS Attachment

This operation is used to Read one MMS attachment from the gateway storage.
GET https://
api.opaali.telia.fi/production/messaging/v1/inbound/{senderAddress}/requests

3.5.1 Request

Example request:

```
GET
https://api.opaali.telia.fi/production/messaging/v1/inbound/registrations/reg123/messages/msg123/attachments/attach123 HTTP/1.1
Accept: image/gif, image/png, image/jpeg, text/html,
application/xml
```

3.5.2 Response

Example response:

```
HTTP/1.1 200 OK
Date: Thu, 04 Jun 2009 02:51:59 GMT
Content-Length: nnnn
Content-Type: image/gif
...GIF89a...binary data
```

3.6 Notify Client About InboundSMSBase64Message Message Arrival

Notifications of Binary SMS MO messages are sent from the server to the client callback URL configured for a short code only notification on the Opaali Portal.

NSEE implements a “Deliver as Binary” policy which you apply to an application to enable the use of `inboundSMSBase64Message` for that application. The value of the `data_coding` parameter (DCS) presented in the received SMPP PDU identifies the binary content. The Binary SMS MO messages should have the value DCS = 4 (UTF8) to send the notification as `inboundSMSBase64Message`.

Go to the Opaali Portal for starting and stopping notifications. See Appendix A.

3.6.1 Notification Format

This section describes about the notification format (Notify Client – Request).

There is one notification for every SMS received matching the notification criteria.

Example JSON request:

```
POST https://<hostname>:<port>/<application notification endpoint>
HTTP/1.1
Content-Type: application/json; charset=UTF-8
Accept: application/json
message-segment-count: 1
Host: <hostname>:<port>
Transfer-Encoding: chunked
{
"inboundMessageNotification" : {
"inboundMessage" : {
"destinationAddress" : "12333",
"senderAddress" : "tel:+358403219113",
"dateTime" : "2017-11-10T08:44:47.000+0000",
"resourceURL" :
"https://api.opaali.telia.fi/production/messaging/v1/inbound/regis
trations/04d3bd35-1d65-4c3d-9660-b70bb07f993b/messages/24077574",
"messageId" : "24077574",
"inboundSMSBase64Message" :
{ "dataCoding" : 4, "
sourcePort" : 9456,
"destinationPort" : 9205,
"message" : "QXAyAEIBQwJEf0Xvv71G77+9Rw==" }
```

```
}
}
}
```

3.6.2 Request Parameters

Table 14 Request Parameters (InboundSMSBase64Message Type)

Parameter	Data Type	Description	Optional
`inboundMessage`	`InboundMessage`	The inbound message containing elements listed in **Table 5**.	No

3.6.3 Response

The client application should return HTTP 204 – No Content.

```
HTTP/1.1 204 No Content
Date: Fri, 26 Sept 2014 02:51:59 GMT
```

3.6.4 Response Parameters

Not Applicable

4 Outbound Messages

4.1 Outbound Message Requests

4.1.1 MT Outbound Message Requests

The POST operation allows you to send an SMS from your application to one or more addresses:

POST https://
api.opaali.telia.fi/production/messaging/v1/outbound/{senderAddress}/requests

4.1.1.1 Request

Example JSON request with a binary message – to multiple addresses, with optional notification in JSON requested:

```
POST
https://api.opaali.telia.fi/production/messaging/v1/outbound/tel%3
A%2B358405005900/requests HTTP/1.1
Host: example-host:8181
Content-type: application/json
Accept: application/json
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b
Content-Length: 188

{"outboundMessageRequest":{
"address":["tel:+358405005387","tel:+358405005987","tel:+358405005
988","tel:+358405005989"],
"senderAddress":"tel:+358405005900",
"outboundSMSBinaryMessage":{"message":"BgUEAAAASGVsbG8gdGhlcmU="},
"senderName":"Telia",
"receiptRequest":  {
      "notifyURL": "https://<hostname>:<port>/<application
notification endpoint>",
      "notificationFormat":"JSON"}   }
}
```

Example XML request – to multiple addresses, with optional notification in XML requested, and charging element:

Outbound Messages

```
POST
https://api.opaali.telia.fi/production/messaging/v1/outbound/15590
/requests HTTP/1.1
Content-type: application/xml
Accept: application/xml
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b

<?xml version="1.0" encoding="UTF-8"?>
<msg:outboundMessageRequest
    xmlns:msg="urn:oma:xml:rest:netapi:messaging:1">
    <address>tel:+358405005957</address>
    <address>tel:+358405005958</address>
    <senderAddress>15590</senderAddress>
    <senderName>Telia</senderName>
    <outboundSMSBinaryMessage>
        <message>BgUEAAAASGVsbG8gdGhlcmU=</message>
    </outboundSMSBinaryMessage>
    <receiptRequest>
    <notifyURL>http://<hostname>:<port>/<application notification
endpoint></notifyURL>
                    <notificationFormat>XML</notificationFormat>
                    <callbackData>TEST CALLBACK
DATA</callbackData>
                </receiptRequest>
                <charging>
                    <description>Charge for POL-SMS-PREMIUM-
03_XML</description>
                    <currency>EUR</currency>
                    <amount>2.99</amount>
                </charging>
            </msg:outboundMessageRequest>
```

Example JSON request with Flash message:

```
POST
https://api.opaali.telia.fi/production/messaging/v1/outbound/15590
/requests HTTP/1.1
Content-type: application/json
Accept: application/json
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b
{
   "outboundMessageRequest":{
      "address":[
         "tel:+35842349023"
      ],
```

Outbound Messages

```
      "senderAddress":"15590",
      "outboundSMSFlashMessage":{
         "flashMessage":"Flash message"
      },
      "charging":{
         "description":[
            "Charge for FN-PUSH-23 Prepaid"
         ],
         "currency":"EUR",
         "amount":"2.99"
      },
      "senderName":"Telia",
      "receiptRequest":{
         "notifyURL":"https://<hostname>:<port>/<application
notification endpoint>",
         "notificationFormat":"JSON",
         "callbackData":"test callback data"
      }
   }
}
```

Example XML request with Flash message:

```
POST
https://api.opaali.telia.fi/production/messaging/v1/outbound/15590
/requests HTTP/1.1
Content-type: application/xml
Accept: application/xml
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b

<?xml version="1.0" encoding="UTF-8"?>
<msg:outboundMessageRequest
    xmlns:msg="urn:oma:xml:rest:netapi:messaging:1">
    <address>tel:+35842349023</address>
    <senderAddress>15590</senderAddress>
    <senderName>Telia</senderName>
    <outboundSMSFlashMessage>
        <flashMessage>Charge for FN-PUSH-23 Prepaid</flashMessage>
    </outboundSMSFlashMessage>
    <receiptRequest>
<notifyURL>http://<hostname>:<port>/<application notification
endpoint></notifyURL>
                    <notificationFormat>XML</notificationFormat>
                    <callbackData>TEST CALLBACK
DATA</callbackData>
                </receiptRequest>
```

Outbound Messages

```
                <charging>
                    <description>Charge for POL-SMS-PREMIUM-
03_XML</description>
                    <currency>EUR</currency>
                    <amount>2.99</amount>
                </charging>
            </msg:outboundMessageRequest>
```

Example JSON request with amount and currency element:

```
POST
https://api.opaali.telia.fi/production/messaging/v1/outbound/15590
/requests HTTP/1.1
Content-type: application/json
Accept: application/json
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b
{
"outboundMessageRequest":{
"address":[
"tel:+35842349023"
],
"senderAddress":"15590",
"outboundSMSTextMessage":
{ "message":"Text message" }
,
"charging":
{ "description":[ "Charge for FN-PUSH-23 Prepaid" ],
"currency":"EUR", "amount":"2.99" }
,
"senderName":"Telia",
"receiptRequest":
{ "notifyURL":"https://<hostname>:<port>/<application notification
endpoint>", "notificationFormat":"JSON", "callbackData":"test
callback data" }
}
}
```

Example XML request – with amount and currency element:

```
POST
https://api.opaali.telia.fi/production/messaging/v1/outbound/15590
/requests HTTP/1.1
Content-type: application/xml
Accept: application/xml
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b

<?xml version="1.0" encoding="UTF-8"?>
<msg:outboundMessageRequest
```

Outbound Messages

```
    xmlns:msg="urn:oma:xml:rest:netapi:messaging:1">
    <address>tel:+35842349023</address>
    <senderAddress>15590</senderAddress>
    <senderName>Telia</senderName>
    <outboundSMSTextMessage>
        <message>Text message</message>
    </outboundSMSTextMessage>
    <receiptRequest>
<notifyURL>http://<hostname>:<port>/<application notification
endpoint></notifyURL>
                    <notificationFormat>XML</notificationFormat>
                    <callbackData>TEST CALLBACK
DATA</callbackData>
                </receiptRequest>
                <charging>
                    <description>Charge for POL-SMS-PREMIUM-
03_XML</description>
                    <currency>EUR</currency>
                    <amount>2.99</amount>
                </charging>
            </msg:outboundMessageRequest>
```

4.1.1.2 Request Parameters

Table 15 Outbound SMS - Request Parameters (OutboundMessageRequest Type)

Parameter	Data Type	Description	Optional
address	URI, can be one or many	One or an array of destination addresses for the Message. This must be an international number of at least 9 digits prefixed with "tel:+".	No
charging	Charging Information	Included for premium SMS, when charging data is passed in the message. See Table 17.	Yes
clientCorrelator	string	A correlator that the client can use to tag this particular resource representation during a request to create a resource on the server.	Yes
outboundMMSMessage	outboundMMSMessage	Included, if MMS is being sent	Choice
outboundSMSBinaryMessage	outboundSMSBinaryMessage	Contains the element: *message* (base64Binary) if a binary format SMS message is sent. See Table 18.	Choice

Outbound Messages

Parameter	Data Type	Description	Optional
		NOTE: It is expected that the contents of the 'message' element MUST include the UDH field.	
`outboundSMSFlashMessage`	`outboundSMSFlashMessage`	Contains the element: *flashMessage* (string) if a Flash SMS message is sent. See Table 19.	Choice
`outboundSMSLogoMessage`	`outboundSMSLogoMessage`	Not supported in the current release.	
`outboundSMSRingToneMessage`	`outboundSMSRingToneMessage`	Not supported in the current release.	
`outboundSMSTextMessage`	`outboundSMSTextMessage`	Contains the element: message (string) if a text message is sent. See Table 20.	Choice
`receiptRequest`	`receiptRequest`	Use if delivery notification is required, to include the notifyURL, as described in Table 16.	Yes
`senderAddress`	`URI`	The address of the sender to whom a responding message may be sent. This must match the senderAddress value in the URI. The number must be prefixed with *tel:* or *short:* as appropriate. • *tel:* must be followed by + and an international number containing a minimum of 9 digits • You may use short codes either without the *short*: prefix or with prefix. ***NOTE:*** If you don't have any assigned short code or tel: number, then use tel:+358000000000 as the sender address. If you use this number, then you need to populate the `senderName` field appropriately.	No
`senderName`	`string`	The name of the sender to appear on the user's terminal as the originator of the message. This parameter supports maximum 11 characters.	Yes

Outbound Messages

Table 16 Outbound SMS - Request Parameters (receiptRequest Type)

Parameter	Data Type	Description	Optional
callbackData	string	Useful data to be passed back in the notification to identify the message. This parameter supports maximum 255 characters.	Yes
notificationFormat	string	JSON or XML.	Yes
notifyURL	URL-escaped URL	The endpoint that is used to notify the application when the message is delivered to a terminal or delivery is impossible. This parameter supports maximum 255 characters. Delivery notifications is sent when this value is present. See section 4.3 for details. ***NOTE:*** If the Callback URL has any other port number associated, than port 80 or 443 firewall opening is mandatory for receiving inbound notifications from the operator service platform. Please send support request to opaali-tuki@teliacompany.com.	No

Table 17 Outbound SMS - Request Parameters (ChargingInformation Type)

Parameter	Data Type	Description	Optional
amount	decimal	The amount to be charged. ***NOTE:*** The amount defined here for service price is excluding VAT.	No
code	string	The charging code.	Yes
currency	string	The currency applied to the charge, in ISO 4217 conformant code such as EUR. This parameter supports maximum 255 characters.	No
description	string	Text describing or related to the charge, such as the billing text. Default: Use the keyword which is configured for your application notification in Opaali portal.	No

Table 18 Outbound SMS - Request Parameters (outboundSMSBinarymessage Type)

Parameter	Data Type	Description	Optional
message	base64Binary	Contains the binary message text. ***NOTE:*** It is expected that the contents of the 'message' element MUST include the UDH field	No

Outbound Messages

Table 19 Outbound SMS - Request Parameters (outboundSMSFlashMessage Type)

Parameter	Data Type	Description	Optional
`flashMessage`	`string`	Contains the Flash message.	No

Table 20 Outbound SMS - Request Parameters (outboundSMSTextMessage Type)

Parameter	Data Type	Description	Optional
`message`	`string`	Contains the SMS message text.	No

4.1.1.3 Response

Example JSON response to requests with single or multiple destination addresses:

```
HTTP/1.1 201 Created
Accept: application/json
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b
Content-Length: 201
Content-Type: application/json
Date: Wed, 24 Sep 2014 12:50:02 GMT
Host: example-host:8181
Location:
https://api.opaali.telia.fi/production/messaging/v1/outbound/tel%3
A%2B358405005900/requests /2f57108f-cdb4-4501-9f02-b6f5399596e2
{
  "resourceReference" : {
    "resourceURL" : "
https://api.opaali.telia.fi/production/messaging/v1/outbound/tel%3
A%2B358405005900/requests /2f57108f-cdb4-4501-9f02-b6f5399596e2"
  }
}
```

Example XML response to requests with single or multiple destination addresses:

```
HTTP/1.1 201 Created
Accept: application/xml
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b
Content-Type: application/xml
Date: Wed, 24 Sep 2014 12:50:02 GMT
Host: example-host:8181
Location:
https://api.opaali.telia.fi/production/messaging/v1/outbound/tel%3
A%2B358405005900/requests/0a1e9013-fbb6-42a9-a5f6-369a49eab7bf
Content-Length: 305
```

Outbound Messages

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<common:resourceReference
xmlns:common="urn:oma:xml:rest:netapi:common:1">
<resourceURL>
https://api.opaali.telia.fi/production/messaging/v1/outbound/short
%3A15590/requests/8929e59e-08a2-4d13-81be-d12403699989
</resourceURL>
</common:resourceReference>
```

4.1.1.4 Response Parameters

Table 21 Outbound SMS - Response Parameters

Parameter	Data Type	Description	Optional
resourceURL	URI	Self-referring URL - a link to the created message resource. Includes the requestId. Can be used by application to check the status of message delivery. See section 4.1.2.	No

4.1.2 MMS MT Outbound Message Requests

The POST operation allows you to send an SMS from your application to one or more addresses:

POST https://api.opaali.telia.fi/production/messaging/v1/outbound/{senderAddress}/requests

4.1.2.1 Request

Example JSON request:

```
POST
https://api.opaali.telia.fi/production/messaging/v1/outbound/12345
6/requests HTTP/1.1
Accept-Encoding: gzip,deflate
Content-Type: multipart/form-data; boundary="----
=_Part_0_21567300.1471928208746"
MIME-Version: 1.0
Authorization: Bearer 63fadf33-c36e-4d04-a3b0-ed11dcb98e0f
Accept: application/json
Content-Length: 871
Host: api.opaali.telia.fi
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)
------=_Part_0_21567300.1471928208746
```

Outbound Messages

```
Content-Type: application/json; name=mmsSend1.json
Content-Transfer-Encoding: binary
Content-Disposition: form-data; name="mmsSend1.json";
filename="mmsSend1.json"

{
    "outboundMessageRequest": {
        "senderAddress": "123456",
        "address": [
            "tel:+358405767253"
        ],
        "outboundMMSMessage": {
            "priority": "High",
            "subject": "FN-FRAUD-01 - json"
        }
    }
}

------=_Part_0_21567300.1471928208746
Content-Type: text/plain; charset=UTF-8; name=readme.txt
Content-Transfer-Encoding: binary
Content-Disposition: form-data; name="readme.txt";
filename="readme.txt"
```

Example XML request:

```
POST
https://api.opaali.telia.fi/production/messaging/v1/outbound/12345
6/requests HTTP/1.1
Accept-Encoding: gzip,deflate
Content-Type: multipart/form-data; boundary="----
=_Part_2_1497298871.1471928386140"
MIME-Version: 1.0
Authorization: Bearer 63fadf33-c36e-4d04-a3b0-ed11dcb98e0f
Accept: application/xml
Content-Length: 824
Host: api.opaali.telia.fi
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)
------=_Part_2_1497298871.1471928386140
Content-Type: application/xml; name=test-xml.xml
Content-Transfer-Encoding: binary
Content-Disposition: form-data; name="test-xml.xml";
filename="test-xml.xml"
<?xml version="1.0" encoding="UTF-8"?>
```

Outbound Messages

```
<msg:outboundMessageRequest
xmlns:msg="urn:oma:xml:rest:netapi:messaging:1">
      <address>tel:+358405767253</address>
      <senderAddress>123456</senderAddress>
      <outboundMMSMessage>
         <subject>FN-FRAUD-01 - xml</subject>
              <priority>High</priority>
      </outboundMMSMessage>
</msg:outboundMessageRequest>
------=_Part_2_1497298871.1471928386140
Content-Type: text/plain; charset=UTF-8; name=Hello
Content-Transfer-Encoding: binary
Content-Disposition: form-data; name="Hello"; filename="Hello"
```

4.1.2.2 Request Parameters

Refer the formats in Table 15.

4.1.2.3 Response

Example JSON response:

```
HTTP/1.1 201 Created
accept: application/json
accept-encoding: gzip, deflate
authorization: Bearer 63fadf33-c36e-4d04-a3b0-ed11dcb98e0f
content-type: application/json
date: Tue, 23 Aug 2016 04:56:49 GMT
location:
https://api.opaali.telia.fi/production/messaging/v1/outbound/12345
6/requests/1e42ab91-f487-4ff1-80cc-ef31bbb7601b
mime-version: 1.0
user-agent: Apache-HttpClient/4.1.1 (java 1.5)
server: Operator Service Platform
Content-Length: 167
{
  "resourceReference" : {
    "resourceURL" :
"https://api.opaali.telia.fi/production/messaging/v1/outbound/1234
56/requests/1e42ab91-f487-4ff1-80cc-ef31bbb7601b"
  }
}
```

Example XML response:

```
HTTP/1.1 201 Created
```

```
accept: application/xml
accept-encoding: gzip, deflate
authorization: Bearer 63fadf33-c36e-4d04-a3b0-ed11dcb98e0f
content-type: application/xml
date: Tue, 23 Aug 2016 04:59:47 GMT
location:
https://api.opaali.telia.fi/production/messaging/v1/outbound/12345
6/requests/5ba643f3-0697-4513-a247-bd7885560062
mime-version: 1.0
user-agent: Apache-HttpClient/4.1.1 (java 1.5)
server: Operator Service Platform
Content-Length: 302
```

4.2 Read Delivery Status of an Outbound Message Request

The GET operation, using the resourceURL received in the Response to the Outbound message (SMS and MMS) requests, allows you to query the delivery status of an outbound messaging request sent from your application.

GET {resourceURL}/deliveryInfos

See in the example at section 3.1.1, that the `resourceURL` appears in two locations:

- Location header field shows the URI of the created message, including the `senderAddress` and `requestID` in the path:

```
Location:
https://api.opaali.telia.fi/production/messaging/v1/outbound/tel%3
A%2B358405005900/requests/da4433af-d76c-4bf6-8522-d6d37364463b
```

- resourceReference object in the response body contains the resourceURL.

```
<resourceURL>
https://api.opaali.telia.fi/production/messaging/v1/outbound/tel%3
A%2B358405005900/requests/da4433af-d76c-4bf6-8522-d6d37364463b
</resourceURL>
```

4.2.1 Request

Example JSON request:

```
GET
https://api.opaali.telia.fi/production/messaging/v1/outbound/tel%3
A%2B358405005900/requests/cb513ae8-c630-409e-abcb-
6bb55cfd7873/deliveryInfos
```

```
HTTP/1.1
Host: api.opaali.telia.fi
Accept: application/json
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b
```

4.2.2 Request Parameters

Table 22 Read Delivery Status - Request Parameters

Parameter	Data Type	Description	Optional
requestId	URI	This identifies the specific SMS delivery request. The value is created when the outbound message is created, and included in the resourceURL returned in the Response.	No
senderAddress	URI	The senderAddress of the outbound SMS request. The value is included in the resourceURL returned in the Response.	No

4.2.3 Response

If the request sent the message to multiple addresses, the delivery status for each destination address is returned.

Example JSON containing status of messages sent to multiple addresses:

```
HTTP/1.1 200 OK
Accept: application/json
Authorization: Bearer 4ba50412-9c7e-42e3-b1b4-a6b8ed75565b
Content-Length: 704
Content-Type: application/json
Date: Wed, 24 Sep 2014 13:32:03 GMT
Host: example-host:8181

{
  "deliveryInfoList" : {
    "resourceURL" :
"https://api.opaali.telia.fi/production/messaging/v1/outbound/tel%
3A%2B358405005900/requests/cb513ae8-c630-409e-abcb-
6bb55cfd7873/deliveryInfos",
    "deliveryInfo" : [ {
      "address" : "tel:+358405007000",
      "deliveryStatus" : "DeliveryImpossible"
    }, {
      "address" : "tel:+358405007001",
```

```
      "deliveryStatus" : "DeliveredToNetwork"
    }, {
      "address" : "tel:+358405007002",
      "deliveryStatus" : "DeliveryImpossible"
    } ]
  }
}
```

Example XML – single address, returning the `callbackData` included in the send request:

```
<?xml version="1.0" encoding="UTF-8"?>
<msg:deliveryInfoNotification
xmlns:msg="urn:oma:xml:rest:netapi:messaging:1">
   <deliveryInfo>
      <address>tel:+358405005902</address>
      <deliveryStatus>DeliveredToTerminal</deliveryStatus>
   </deliveryInfo>
  <link rel="OutboundMessageRequest"
href=https://api.opaali.telia.fi/production/tel%3A%2B358405005900/
requests/a8c1505f-88fa-4ad2-865c-fac9471fb852"/>
  <callbackData>12345</callbackData>
</msg:deliveryInfoNotification>
```

4.2.4 Response Parameters

The deliveryInfoList data structure contains the delivery information for each address to which you sent the message, in a `deliveryInfo` array.

Table 23 Read Delivery Status - Response Parameters (deliveryInfoList Type)

Parameter	Data Type	Description	Optional
`deliveryInfo`	`deliveryInfo`	Contains delivery information. See next Table 24.	No
`resourceURL`	`URI`	URI of the created message, as the reference to this response.	No

Table 24 Read Delivery Status - Response Parameters (deliveryInfo Type)

Parameter	Data Type	Description	Optional
`address`	`URI`	Outbound message destination address.	No
`deliveryStatus`	`deliveryStatus`	Contains the delivery result for the destination address. See Table 25 for available values.	No
`description`	`string`	Used together with deliveryStatus to provide additional information.	Yes

Table 25 DeliveryStatus

Status	Description
`DeliveredToNetwork`	Successful delivery to the network enabler responsible for routing the SMS.
`DeliveredToTerminal`	Successful delivery to the terminal.
`DeliveryImpossible`	Unsuccessful delivery; the message is not delivered before it expired.
`DeliveryNotificationNotSupported`	Unable to provide delivery receipt notification.
`DeliveryUncertain`	Delivery status unknown. For example, because it was handed off to another network.
`MessageWaiting`	The message is still queued for delivery. This is a temporary state, pending transition to one of the preceding states.

4.3 Notify Client About Outbound Message Delivery Status

Delivery notifications can be sent to the client for DeliveredToTerminal and DeliveryImpossible statuses. To have them sent, provide the application notifyURL (a URL-escaped callback URL) in the optional receiptRequest parameter in the outbound messaging request. See section 2.6 for data structure.

A separate notification is sent for each destination address included in the messaging request.

This section describes the format of delivery notifications sent from the server to the client application.

4.3.1 Notification Format

This section describes about the notification format (Notify Client – Request).

```
POST
https://<hostname>:<port>/<application notification endpoint>
HTTP/1.1
Content-Type: application/json
Accept: application/json
Host: <hostname>:<port>
Content-Length: 412

<?xml version="1.0" encoding="UTF-8"?>
```

Outbound Messages

```
<msg:deliveryInfoNotification
xmlns:msg="urn:oma:xml:rest:netapi:messaging:1">
   <deliveryInfo>
      <address>tel:+358405005987</address>
      <deliveryStatus>DeliveredToTerminal</deliveryStatus>
   </deliveryInfo>
   <link rel="OutboundMessageRequest"
href="https://api.opaali.telia.fi/production/messaging/v1/outbound
/tel%3A%2B358405005900/requests/220ef797-ab94-46dd-ac66-
a36a10dcc2ac"/>
</msg:deliveryInfoNotification>
```

4.3.2 Request Parameters

Table 26 Notify Client about Outbound Message Delivery Status - Request Parameters (deliveryInfoNotification Type)

Parameter	Data Type	Description	Optional
callbackData	string	CallbackData for the messaging session, matching the one in the outbound message request call, if this was provided.	Is included, if provided in Request call
deliveryInfo	deliveryInfo	Contains delivery information. One structure for each destination address. See next Table 27.	No

Table 27 Notify Client about Message Delivery Status - Request Parameters (deliveryInfo Type)

Parameter	Data Type	Description	Optional
address	URI	The outbound message destination address, matching the one used in the outbound messaging request.	No
deliveryStatus	deliveryStatus	Contains the delivery result for the destination address: either DeliveredToTerminal or DeliveryImpossible.	No

4.3.3 Response

```
HTTP/1.1 204 No Content
Date: Fri, 26 Sept 2014 02:51:59 GMT
```

4.3.4 Response Parameters

Not applicable.

4.4 Payload Limitations for Different Character Sets

By default, the Telia-OMA Messaging API supports Latin 9 alphabet which includes Finnish characters and the Euro symbol (€). To use Cyrillic characters, add the sms-charset HTTP header with value as UCS-2 in the API request.

4.4.1 Normal Message Length

MT text messages with **less than 160 characters** will be a **single segment** message whereas MT text messages with **more than 160 characters** will be segmented by **153 characters**.

4.4.2 Cyrillic Message Length

MT messages containing CYRILLIC characters (sms-charset header value is UCS-2) containing **less than 70 characters** will be a **single segment** message whereas MT messages containing CYRILLIC characters (sms-charset header value UCS-2) containing **more than 70 characters** will segmented by **67 characters**.

4.4.3 Binary Message Length

Binary MT messages with **less than 140 characters** will be single segment whereas Binary MT messages with **more than 140 characters** will be segmented by **134 characters**

5 Messaging Subscription

5.1 Inbound Message Subscription

The resource used is

http://api.opaali.telia.fi/production/messaging/v1/inbound/subscriptions

Resource gives access to inbound subscriptions for a particular client. This resource can be used in conjunction with a Client-side Notification URL, or in conjunction with a Server-side Notification URL.

5.1.1 Create Inbound Subscription, Returning the Location of Created Resource

5.1.1.1 Request

Example JSON request

```
POST
https://api.opaali.telia.fi/production/messaging/v1/inbound/subscr
iptions HTTP/1.1
Accept-Encoding: gzip,deflate
Content-Type: application/json
Authorization: Bearer b7ff9e3c-65ae-4cd6-a570-412a58a3b39c
Content-Length: 295
Host: api.opaali.telia.fi
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)

{"subscription": {
"callbackReference": {
"callbackData": "12345",
"notifyURL": "http://dev33:7080/NGW-NEW-
SIM/partner/sms/notification/listener/tpa"
},
"clientCorrelator": "e00ea48c-b51f-4a9d-9276-667d333c99da",
"criteria": "KEY8",
"destinationAddress": ["1695"],
"useAttachmentURLs": "true"
}}
```

Messaging Subscription

Example XML request

```
POST
https://api.opaali.telia.fi/production/messaging/v1/inbound/subscr
iptions HTTP/1.1
Accept-Encoding: gzip,deflate
Content-Type: application/xml
Authorization: Bearer b7ff9e3c-65ae-4cd6-a570-412a58a3b39c
Content-Length: 482
Host: api.opaali.telia.fi
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)
<?xml version="1.0" encoding="UTF-8"?>
<msg:subscription xmlns:msg="urn:oma:xml:rest:netapi:messaging:1">
<callbackReference>
<notifyURL>http://dev33:7080/NGW-NEW-
SIM/partner/sms/notification/listener/tpa</notifyURL>
<callbackData>12345</callbackData>
</callbackReference>
<destinationAddress>1695</destinationAddress>
<criteria>KEY7</criteria>
<clientCorrelator>2db0e334-7086-4d3e-87df-
858eee51c8f0</clientCorrelator>
<useAttachmentURLs>true</useAttachmentURLs></msg:subscription>
```

5.1.1.2 Response

Example JSON response

```
HTTP/1.1 201 Created
Accept-Encoding: gzip,deflate
Authorization: Bearer b7ff9e3c-65ae-4cd6-a570-412a58a3b39c
Content-Type: application/json
Date: Tue, 09 Aug 2016 05:58:50 GMT
Location: https://
api.opaali.telia.fi/production/messaging/v1/inbound/subscriptions/
1e009a7a-b287-402b-ac00-6b3cf029f34a
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)
Transfer-Encoding: chunked
Server: Operator Service Platform

{
  "resourceReference" : {
    "resourceURL" : " https://
api.opaali.telia.fi/production/messaging/v1/inbound/subscriptions/
1e009a7a-b287-402b-ac00-6b3cf029f34a"
```

```
  }
}
```

Example XML response

```
HTTP/1.1 201 Created
Accept-Encoding: gzip,deflate
Authorization: Bearer b7ff9e3c-65ae-4cd6-a570-412a58a3b39c
Content-Type: application/xml
Date: Tue, 09 Aug 2016 05:56:28 GMT
Location:
https://api.opaali.telia.fi/production/messaging/v1/inbound/subscr
iptions/1dbe105c-07ab-4999-9ad0-a220a0f138ec
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)
Content-Length: 295
Server: Operator Service Platform

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<common:resourceReference
xmlns:common="urn:oma:xml:rest:netapi:common:1">

<resourceURL>https://api.opaali.telia.fi/production/messaging/v1/i
nbound/subscriptions/1dbe105c-07ab-4999-9ad0-
a220a0f138ec</resourceURL>
</common:resourceReference>
```

5.1.2 Delete Subscription

This operation is used to delete a subscription for the particular client.

The resource used is
https://api.opaali.telia.fi/production/messaging/v1/inbound/subscriptions/{subscriptionID}

5.1.2.1 Request

Example request, do not use Content-Type header.

```
DELETE
https://api.opaali.telia.fi/production/messaging/v1/inbound/subscr
iptions/1e12bd3c-301b-4e8f-87be-63da7e6bbdea HTTP/1.1
Authorization: Bearer 58993ed8-fc47-4d3d-9341-271821b25eae
Content-Length: 0
Host: api.opaali.telia.fi
```

5.1.2.2 Response

Example response

```
HTTP/1.1 204 No Content
content-type: application/xml
date: Thu, 31 Aug 2017 10:21:26 GMT
server: Operator Service Platform
Content-Length: 0
```

5.2 Outbound Message Delivery Notification Subscriptions

The resource used is

https://api.opaali.telia.fi/production/messaging/v1/outbound/{senderAddress}/subscriptions

This resource gives access to outbound subscriptions for a particular client. This resource can be used in conjunction with a client-side Notification URL, or in conjunction with a server-side Notification URL. In this latter case, the application MUST first create a Notification Channel before creating a subscription.

5.2.1 Create Outbound Notification and Return Location of the Created Resource

This operation is used to create a new outbound message delivery notification subscription for the particular client.

5.2.1.1 Request

Example JSON request

```
POST
https://api.opaali.telia.fi/production/messaging/v1/outbound/1984/
subscriptions HTTP/1.1
Accept-Encoding: gzip,deflate
Content-Type: application/json
Authorization: Bearer c0852a69-3b64-4679-bf7e-6165dadff7c2
Content-Length: 303
Host: localhost: api.opaali.telia.fi
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)
```

Messaging Subscription

```
{"deliveryReceiptSubscription":
{
"callbackReference":
{"notifyURL": "http://dev33:7080/NGW-NEW-
SIM/partner/sms/notification/listener",
"callbackData": "45678_call back data"
},
"filterCriteria": "1984",
"clientCorrelator":"ded841d6-54c7-4e5e-90a7-630eac1f69b9",
}}
```

Example XML request

```
POST
https://api.opaali.telia.fi/production/messaging/v1/outbound/1984/
subscriptions HTTP/1.1
Accept-Encoding: gzip, deflate
Content-Type: application/xml
Authorization: Bearer b4a64aa3-aee7-44af-a45c-46b4679bda95
Content-Length: 424
Host: localhost: api.opaali.telia.fi
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)

<?xml version="1.0" encoding="UTF-8"?>
<msg:deliveryReceiptSubscription
xmlns:msg="urn:oma:xml:rest:netapi:messaging:1">
<callbackReference>
<notifyURL>l</notifyURL>
<callbackData>22222_partner1</callbackData>
</callbackReference>
<filterCriteria>1984</filterCriteria>
<clientCorrelator>b8674b34-09fa-4754-a74b-
9e8a122c1906</clientCorrelator>
</msg:deliveryReceiptSubscription>
```

5.2.1.2 Response

Example JSON response

```
HTTP/1.1 201 Created
Content-Type: application/json
Date: Tue, 09 Aug 2016 06:35:47 GMT
```

Messaging Subscription

```
Location:
https://api.opaali.telia.fi/production/messaging/v1/outbound/1984/
subscriptions/ec520833-c2da-4417-82df-f88c46615914
Transfer-Encoding: chunked
Server: Operator Service Platform

{
  "resourceReference" :
{
    "resourceURL" :
"https://api.opaali.telia.fi/production/messaging/v1/outbound/1984
/subscriptions/ec520833-c2da-4417-82df-f88c46615914"
  }
}
```

Example XML response

```
HTTP/1.1 201 Created
Content-Type:  application/xml
Date: Tue, 09 Aug 2016 06:33:40 GMT
Location:
https://api.opaali.telia.fi/production/messaging/v1/outbound/1984/
subscriptions/8286d1f1-1f64-4368-a468-28f891250710
Content-Length: 301
Server: Operator Service Platform

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<common:resourceReference
xmlns:common="urn:oma:xml:rest:netapi:common:1">
    <resourceURL>
https://api.opaali.telia.fi/production/messaging/v1/outbound/1984/
subscriptions/8286d1f1-1f64-4368-a468-28f891250710</resourceURL>
</common:resourceReference>
```

5.2.2 Delete Subscription

This operation is used to delete a subscription for the particular client.

The resource used is

https://api.opaali.telia.fi/production/messaging/v1/outbound/{senderAddress}/subscriptions/{subscriptionID}"

5.2.2.1 Request

Example request, do not use Content-Type header.

Messaging Subscription

```
DELETE
https://api.opaali.telia.fi/production/messaging/v1/outbound/1984/
subscriptions/1e12bd3c-301b-4e8f-87be-63da7e6bbdea HTTP/1.1
Content-Lenght: 0
Host: api.opaali.telia.fi
Authorization: Bearer 58993ed8-fc47-4d3d-9341-271821b25eae
```

5.2.2.2 Response

Example response

```
HTTP/1.1 204 No Content
content-type: application/xml
date: Thu, 31 Aug 2017 10:37:44 GMT
server: Operator Service Platform
Content-Length: 0
```

6 Response Codes and Exceptions

6.1 Response Codes

HTTP response codes are used to indicate:

200 – Success!

201 – Created. The operation was successful, and a new resource has been created by the request.

202 – Accepted. If the messaging request has more than one destinations addresses and if delivery of the message to one of them has failed, then the server responds with 202 accepted.

400 – Bad request; check the error message for details. Generally returned for a service exception.

401 – Authentication failure, check your authentication details.

403 – Forbidden; please provide authentication credentials. Returned for policy exceptions.

404 – Not found: mistake in the host or path of the service URI

405 – Method not supported: for example you mistakenly used a HTTP GET to create an MMS instead of a POST

500 – Internal Error; the server encountered an unexpected condition which prevented it from fulfilling the request

503 – Server busy and service unavailable. Please retry the request.

For more details, refer to http://www.ietf.org/rfc/rfc2616.txt.

6.2 Exceptions

This section lists the available error codes, the possible reasons why the exception may have occurred, and possible solutions.

The example below shows a service exception, when the address was sent without `'tel:+'`:

```
HTTP/1.1 400 Bad Request
Content-Type: application/json
Content-Length: 1234
```

Response Codes and Exceptions

```
Date: Thu, 03 Jul 2014 02:51:59 GMT

{"requestError": {
 "serviceException": {
 "messageId": "SVC0002",
 "text": " Invalid input value for message part address with value
447919891111. Reason Invalid address element",
 "variables": ["address", "447919891111", "Invalid address
element"]
 }
}}
```

All error response return the messaged and text lines; some, like above, have the variables line.

The example below shows a policy exception, for POL-028:

```
{
  "requestError" : {
    "policyException" : {
      "messageId" : "POL2000",
      "text" : "The following policy error occurred: %1. Error
code is %2.",
      "variables" : [ "Destination Black List is enforced and
address is in Destination Black List.", "POL-028"]
    }
  }
}
```

6.2.1 Service Exceptions

A service exception describes the reason why the service cannot accept the request.

The following service exceptions may be thrown for message requests:

Table 28 Message Request Exceptions

HTTP and Exception Codes	Explanation
400 **SVC0001**	An internal service error has occurred. Please try again later. This response returns when unexpected errors occurred such as database failure or memory overflow.
400	Invalid address element. Invalid senderAddress element.

Response Codes and Exceptions

HTTP and Exception Codes	Explanation
SVC0002 – Invalid input value for message part `{element_name}`	For example, if any other than *tel:* URI is used; if not in international format beginning with +; if there are too few digits. Invalid `requestID`. Invalid `registrationID`.
400 **SVC0007**	Invalid Charging Information When the charging information element is populated but the Description, Amount, or Currency element is missing from the request.
400 **SVC0008**	Duplicated choice element. For example, if the request contains both outboundSMSTextMessage and `outboundMMSMessage`.
400 **SVC3000**	DeliveryImpossible. Returns this response in `DeliveryInfoNotification` when a connection failure occurs towards Telia's core network.
403 **SVC0284**	Receipting Enabled Policy is in force and requested, but it is not enabled for this service. Remove the receipt request and re-submit your request. See section 4.3 for related information.
403 **SVC2000**	The following policy error occurred: URL encoding is not supported. Error code is 2004. Returned when a URL-encoded request is sent.
404 **SVC0004** – No valid address(es)	The address element is missing from the request. The senderAddress element is missing from the request. Mismatched senderAddress (between the URI and in the body).
403 **SVC0009**	Strong authentication failure for subscriber <MSISDN>.Reason is <Reason> Parameter values are returned as a variable array in the order as defined in error text. This exception is thrown for following reasons. - Subscriber does not have a mobile certificate in strong authentication service side. - Subscriber rejects strong authentication.
403 **SVC4000**	Strong authentication failure for subscriber <MSISDN>.Reason is <Reason>.Try again later. Parameter values are returned as a variable array in the order as defined in error text. This exception is thrown for following reasons. - Subscriber enters wrong PIN code for strong authentication request.

Response Codes and Exceptions

HTTP and Exception Codes	Explanation
	- Strong authentication request has already been sent to the subscriber
503 **SVC4000**	Strong authentication failure for subscriber <MSISDN>.Reason is <Reason>.Try again later. Parameter values are returned as a variable array in the order as defined in error text. This exception is thrown for following reasons. - Subscriber authentication fails due to timeout
500 **SVC4000**	Strong authentication failure for subscriber <MSISDN>.Reason is <Reason>.Try again later. Parameter values are returned as a variable array in the order as defined in error text. This exception is thrown for following reasons. - Strong Identification endpoint not available

6.2.2 Policy Exceptions

A policy exception means that the request syntax is valid, but that there is not support provided within Operator Service Platform.

POL1000 – Prepaid Subscriber with Insufficient Credit; HTTP response code 403

POL200x – General policy error occurred; HTTP response code 403

POL30xx – Operator Service Platform specific service policy error occurred; HTTP response code 403

POL31xx – Operator Service Platform specific subscriber related error occurred; HTTP code 403

POL2000 and **3000** range of exceptions may be thrown to indicate a fault relating to a policy associated with the service, as listed in Table 29.

Table 29 Policy Exceptions

Error Code	Error Text/ Action Required
2001 Resource not supported	The following policy error occurred: OMA Resource <resource name> not supported. Error code is 2001.
2002 Verb not supported	The following policy error occurred: Verb <verb name> not supported in OMA resource <resource name>. Error code is 2002.
2003 Element not supported	The following policy error occurred: Element <element name> not supported in OMA resource <resource name>. Error code is 2003.

Response Codes and Exceptions

2004 Value not supported	The following policy error occurred: Value <value> not supported in OMA element <element name>. Error code is 2004.
POL0003: Too many recipients	More than allowed by the Maximum Destination Addresses policy value; HTTP response code 403
POL0008: Charging Allowed policy	An exception is returned if this is disabled for an MT Messaging application and the `outboundMessageRequest.charging` element is included. HTTP response code 403
POL0254: Charge Limit policy	An exception is returned when the charge amount in a transaction exceeds the maximum value set in the policy. HTTP response code 403
POL3001: Max Message Length is enforced, and max message length has been exceeded	The following policy error occurred: Maximum Message Length Exceeded. Error code is 3001. Check your SLA for the maximum message length, update your message and re-submit your request.
POL3002: Min Message Length is enforced, and message length is less than min allowed	The following policy error occurred: Minimum Message Length Exceeded. Error code is 3002. Check your SLA for the minimum message length, update your message and re-submit your request.
POL3003: Max transactions per interval is enforced, and you have made more requests.	The following policy error occurred: Maximum Transactions per Interval Exceeded. Error code is 3003. Check your SLA for the maximum transaction rate allowed. For example, 10 TPS. Ensure that the rate of your requests is within the limits.
POL3004: Max transactions is enforced, and max requests has been exceeded	The following policy error occurred: Maximum Transactions Exceeded. Error code is 3004. Check your SLA for the maximum transactions allowed,
POL3005: The callback endpoint parameter is not prefixed by HTTPS.	The following policy error occurred: HTTPS Callback Required. Error code is 3005. The callback URL/notify URL parameter is missing 'https'.
POL3006: Destination White List is enforced, and address is not in Destination White List	The following policy error occurred: Destination Whitelist. Error code is 3006. A destination white list is enforced and the number is not in the white list. The address is rejected. Check your SLA details.
POL3007: Destination Black List is enforced and address is in Destination Black List.	The following policy error occurred: Destination Blacklist. Error code is 3006. A destination black list is enforced and the number is on the list. The address is rejected.
POL3008: Sender White List is enforced and address is not in Sender White List.	The following policy error occurred: Sender Address Whitelist. Error code is 3008. A sender white list is enforced and the number is not in the list. The address is rejected.

Response Codes and Exceptions

POL3009: Sender Black List is enforced and address is in Sender Black List.	The following policy error occurred: Sender Address Blacklist. Error code is 3009. A sender black list is enforced and the number is on the list. The address is rejected.
POL3010: outboundMessageRequest policy	The following policy error occurred: outboundMessageRequest not allowed. Error code is 3010. The error is returned when the policy/operation is disabled for the application.
POL3011: MMS Allowed policy	The following policy error occurred: MMS not allowed. Error code is 3011 The error is returned when the policy/MMS operation is disabled for the application.
POL3012: AmountTransaction policy	The following policy error occurred: AmountTransaction not allowed. Error code is 3012. The error is returned when the policy/operation is disabled for the application.
POL3013: AmountReservationTransaction policy	The following policy error occurred: AmountReservationTransaction not allowed. Error code is 3013.
POL3014: Charge Currency policy	The following policy error occurred: Only Partner's own currency allowed. Error code is 3014. The error is returned when the policy is set to the partner's currency only, and the transaction uses another currency.
POL3015: Polling Allowed policy	The following policy error occurred: `InboundMessageRetrieveAndDelete` is not allowed. Error code is 3015. The error is returned when the policy is disabled for the application.
POL3017: Purchase limit exceeded for billing period	Subscriber <MSISDN> purchase limit exceeded for billing period. Parameter values are returned as a variable array in the order as defined in error text. This error is thrown when a subscriber has exceeded the total purchase limit for billing period.
POL3018: Prepaid subscribers block policy	Subscriber <MSISDN> Service Disabled.Reason is <Reason>. Parameter values are returned as a variable array in the order as defined in error text. The error is returned when a payment act transaction is made on behalf of a prepaid subscriber. If an application is having attribute APPLICATION_PAYMENT_ACT=yes or APPLICATION_PAYMENT_ACT=no and message price with vat >= 50 is considered as a payment act transaction.
POL3101: Missing Subscriber Data	Subscriber < MSISDN> is not found. Error code is 3101.

Response Codes and Exceptions

	The error is returned when is the subscriber's entry is not found in the database.
POL3102: Service Barred	Subscriber <MSISDN> Service Barred. Error Code 3102 If the *Subscriber_Access_Status* is PASSIVE the service does not proceed and this error returns. If the `Subscriber_Access_Status` is ACTIVE the subscriber is barred from receiving your content type.
POL3103: Service Disabled	Subscriber <MSISDN> Service Disabled. Error Code 3103. The error is returned when the subscription is no longer active.
POL3104: Premium Service not Requested	Subscriber <MSISDN> has not requested this {service type} service. Error code is 3104. The error is returned when *Push* or *Query/Response* service type is not requested by the subscriber.
POL3105: Premium Service Expired	Subscriber <MSISDN> – {service type} Service Request Expired. Error code is 3105. The error is returned when *Push* or *Query/Response* service type has expired for the subscriber.
POL3206: senderAddress does not match a configured short code for this application:	The following policy error occurred: senderAddress does not match a configured short code for this application. Error code is 3206. Sender address should be a configured shot code for the application in developer portal.
POL0252: Fraud Detection/Aggregated Charge Limit Policy	An exception is returned when the subscriber's aggregated charge amount exceeds the aggregated charge limit for a given period. HTTP response code: 403 Error Text: "Subscriber <MSISDN> exceeded the maximum of mobile payment purchases allowed for given period"
POL3020: Sender Name Whitelist is enforced, and sender name is not in Sender Name Whitelist.	The following policy error occurred: Sender Name Whitelist. Error code is 3020. A sender name whitelist is enforced and the sender name is not in the list. The sender name is rejected.
POL3019: Sender name Blacklist is enforced, and sender name is in Sender Name Blacklist.	The following policy error occurred: Sender Name Blacklist. Error code is 3019. A sender name blacklist is enforced and the sender name is on the list. The sender name is rejected.

6.3 Expired Tokens

An expired token is the same as the invalid token in that when it expires it is removed from the database.

The example below shows a response when the OAuth token has expired.

```
HTTP/1.1 401 Unauthorized
date: Wed, 29 Jul 2015 07:52:39 GMT
Content-Length: 0
```

A Starting and Stopping Notifications

Starting and stopping notifications is managed from the Opaali Portal. This involves using one of the short codes or long numbers assigned to the application on the platform (or configuring a `callback` URL) and a keyword to automatically start receiving SMS arrival and receipt notifications.

The steps described below assume that the Opaali Portal login allows the user to manage notifications for their applications.

A.1 Starting Notifications

The task is divided into three sub-sections in a standard workflow:

1. Request Numbers
2. Create keywords
3. Create notifications.

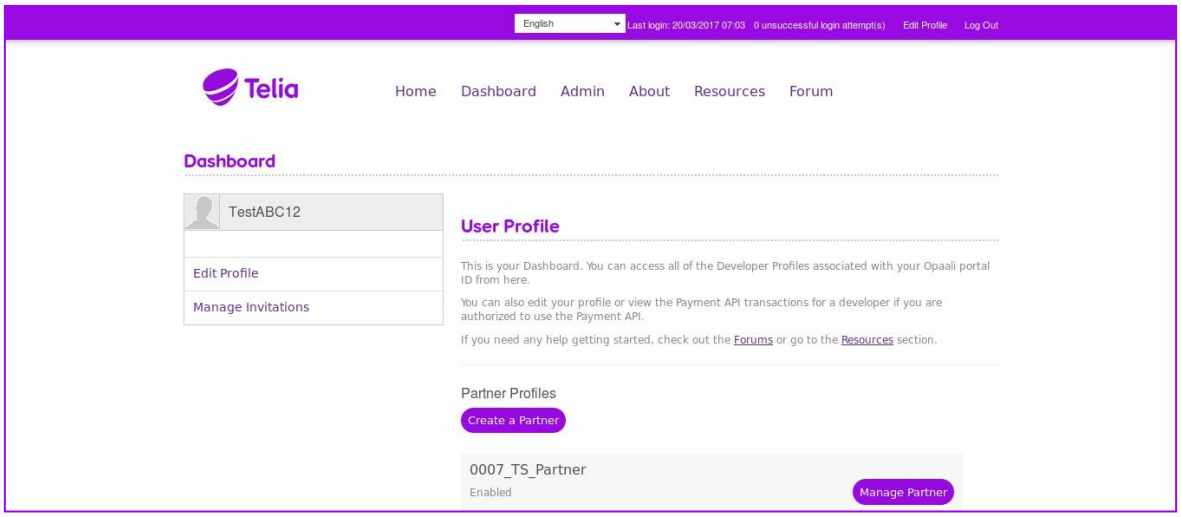
A.1.1 Requesting Numbers

A request must be sent to the administrator to assign a short code or long number to the application.

NOTE: Request Number is only available to Partner Administrators. Other users of the partner can associate existing short code/long numbers to their applications but they cannot request a new short code or long number.

1. Log in to the Opaali Portal.

   The **Dashboard** appears, as shown below.



Starting and Stopping Notifications

2. Click **Manage Partner** to access the list of Projects for that Partner.

   The Partner Profile page appears, listing the Registered Projects.

3. Click **Manage Application** for the relevant Application.

   The Application Profile page appears for the selected Application.

4. Click **Manage Notifications**.

   The Manage Notifications page appears.

5. Click **Request Number**.

   The Create a New Number page appears.

NOTE: Request Number is only available to Partner Administrators. Other users of the partner can associate existing short code/long numbers to their applications but they cannot request a new short code or long number.

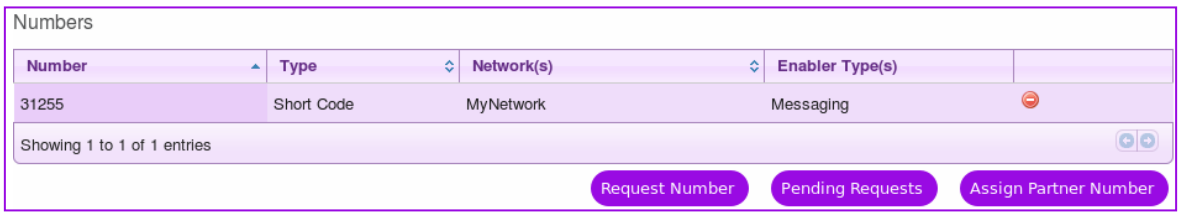
6. Select the **Number Type** that is needed from the dropdown list, such as Short Code or Long Number.
7. Specify whether the Portal administrator should assign a number automatically, or specify a specific number by entering it in the field provided. This is unique to the Project.
8. Select **Country** and **Networks** from the list displayed. Only one network can be assigned to a long number.

TIP: If the Project is being tested against the Sandbox version of the service, choose the *'Test'* network.

9. Click **Submit**.

The request is submitted to the administrator, and until approved, is listed in the Pending Requests page. (Click **Pending Requests** on the Manage Notifications page.)

You receive an email when the request is approved. It contains the shortcode or long number assigned. The Manage Notifications page shows the assigned number in the Numbers panel:



TIP: You can remove the number from the Project by clicking the icon. To add it back, use the **Assign Partner Number** button.

TIP: As an option, **Callback Credentials** can be created from the Manage Notifications page. This adds authentication for the notification to access the Project.

A.1.2 Creating Keywords

A keyword needs to be created in combination with the number to be used for notifications. Each keyword + number pair must be unique across the platform, which means that if a single notification is being created using the Project specific number, keyword is not necessary. In this case, skip the steps below and go directly to Creating Notifications.

TIP: A keyword can also be created during notification creation.

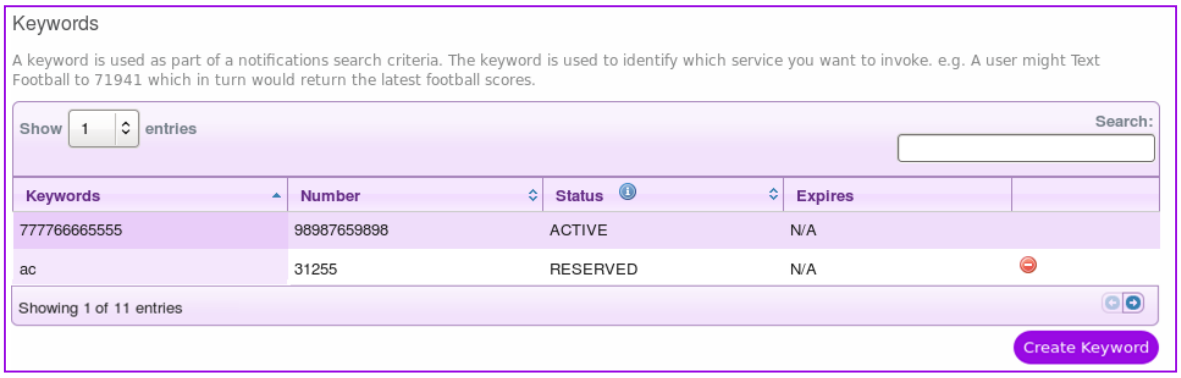
1. From the Manage Notifications page, click **Create Keyword**.

   The Create Keyword page appears.

2. Select the number with which to associate the keyword, from the **Number** drop-down list.

3. Enter the **Keyword**. An error message is returned if the keyword is in use or it does not conform to the system rules.

This refreshed the Manage Notifications page and indicates that the keyword is in RESERVED status, as shown below:



The status changes to ACTIVE when the keyword is in use with a notification. The RESERVED status expires after a system configured number of days.

A.1.3 Creating Notifications

A notification can now be created, which starts immediately.

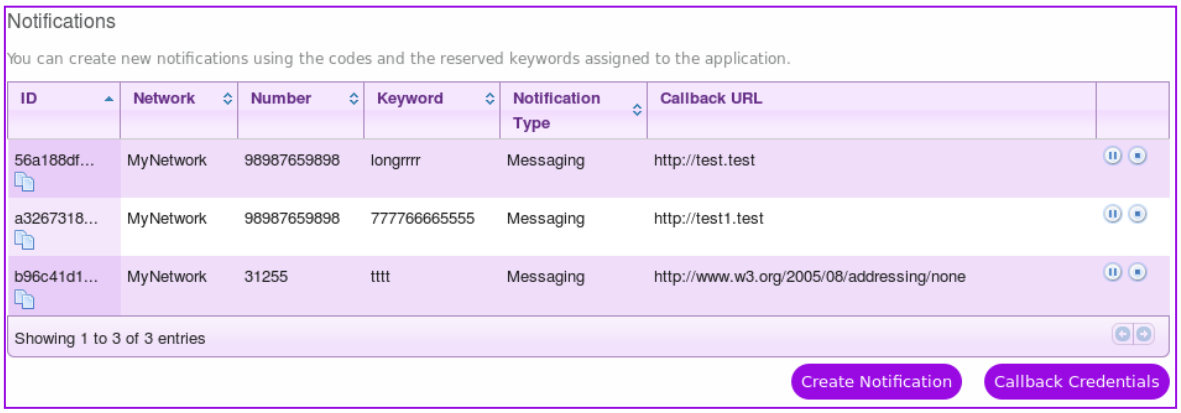
1. From the Manage Notifications page, click **Create Notifications**.

2. Select the **Notification Type** from the dropdown list. **Messaging** is available by default.

3. Select the **Number** to use from the drop-down list.
4. Select the **Keyword** from the drop-down list, or create one by clicking **Request Keywords**.
5. Select either the *Poll* or *Push* notification model as follows:
   - Polling Message Retrieval - cache and collect model. No application callback is required. The application periodically retrieves messages from the platform through the API
   - Push Notification - direct push of notifications. An application callback is required.
6. If Push Notification is selected, enter the **Callback Url** in the field provided.
7. Click **Save**.

This starts the notification.

This refreshes the Manage Notifications page to display the notification with its ID, and the callback URL as entered. The pause and stop buttons are available on the right-hand-side, as seen below.



In the screenshot above, three notifications have been created:
http://www.w3.org/2005/08/addressing/none is the default URL for the Poll option.

In the ID column, click on the files icon to view the full ID.

B Pausing, Restarting, and Stopping Notifications

To pause, restart, and stop notifications, perform the following steps:

1. From the Dashboard, click **Manage Partner** > **Manage Project** > **Manage Notifications** to find the notification.
2. Click the appropriate button at the right-hand-side of the row:
   -  - to pause a notification that has been started
   -  - to restart a notification that has been paused
   -  - to stop a notification.
3. Confirm this action when prompted.

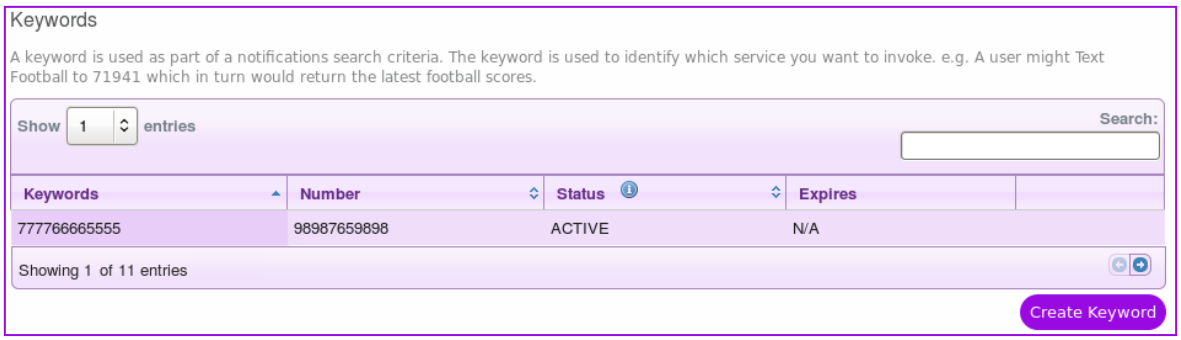
NOTE: When you stop a notification, it is removed from the system. It cannot be restarted, but you can re-create an identical notification.

C De-assigning and Reactivating Keywords

Keywords in RESERVED status can be de-assigned from the Project and put into QUARANTINED status, and if necessary reactivated back to RESERVED status.

To manage Project keywords

1. From the Manage Notifications page, find the keyword. For example,



2. Click on one of the following icons:

   - - Places the keyword in quarantine. This means that the keyword can be reactivated up until the date shown in the Expires column. After this date, the keyword is completely removed from the Project and made available to other Projects
   - - Reactivates the keyword and changes the status to reserved
   - - Completely removes the keyword from the Project.

End of Document