ApigateHub API Specification [Northbound] – Short Message Service

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Short Mssage Service API Specification

NOTE:

All APIs discussed under this section are RESTful APIs with a JSON payload where applicable.

API End Point Name	URI
SMS	
Send SMS URL	Please Request
Delivery Status URL	Please Request
Delivery Notification URL	Please Request
Stop Delivery Notification URL	Please Request
Receive SMS URL	Please Request
Subscribe Notification URL	Please Request
Subscription Stop URL	Please Request

APIs discussed hereon are based on OneAPI V3

- Send an SMS from your application
- Query the Delivery Status of an SMS
- Retrieve SMS Sent to your application
- Subscribe to Notifications of messages sent to your application
- Stop the subscription to message Notifications

1 Send SMS

HTTP Method	POST
Operation	Used to send an SMS from an application (to one or more mobile terminals).

1.1 Request

```
POST <SMS API URL>/outbound/{senderAddress}/requests
Content-Type: application/json
Authorization: Bearer < access key > {
      "outboundSMSMessageRequest": {
            "address": [
                     "tel:+00123456788",
                     "tel:+00123456789"
            ],
            "senderAddress": "tel:+7878",
            "senderName": "SP1",
            "outboundSMSTextMessage": {
                     "message": "Hello World"
            },
            "clientCorrelator": "123456",
            "receiptRequest": {
            "notifyURL": "http://application.example.com/notifications/DeliveryInfoNotification",
                     "callbackData": "some-data-useful-to-the-requester"
            }
      }
}
```

1.1.1   Request Parameters

Parameter name	Description	Usage
address	(string array) At least one address will be provided; in this case the recipients MSISDN including the 'tel:' protocol identifier and the country code preceded by '+'. i.e., tel:+00123456788.	Mandatory, one or more
callbackData	(string) will be passed back in this notification. It's used to identify the message the receipt relates to (or any other useful data, such as a function name). This is only valid if notifications are required – sent with the notifyURL parameter within the receiptRequest element	Optional
clientCorrelator	(string) uniquely identifies this create SMS request. If there is a communication failure during the request, using the same clientCorrelator when retrying the request allows the ApigateHub Exchange to avoid sending the same SMS twice.	Mandatory
message	(string) will be provided within the outboundSMSTextMessage element. Messages over 160 characters will be sent as two or more messages. Note: Message content is only supported in English	Mandatory
notifyURL	(URI) the URL to which you would like a notification of delivery sent. The format of this notification is shown below. If notifications are required the notifyURL parameter will be sent within the receiptRequest element	Mandatory
senderAddress	(string) is the address to whom a responding SMS may be sent	Mandatory
senderName	(string) is the URL-escaped name of the sender to appear on the terminal is the address to whom a responding SMS may be sent.	Optional

1.2   Response

```
HTTP / 1.1 201 Created
Content - Type: application/json
Location:  <Send SMS URL>/{senderAddress}/requests/{requestId}
Content - Length: 12345
Date: Thu, 04 Jun 2009 02: 51: 59 GMT{
        "outboundSMSMessageRequest": {
                "address": [
                        "tel:+00123456788",
                        "tel:+00123456789"
                ],
                "deliveryInfoList": {
                        "deliveryInfo": [{
                                        "address": "tel:+00123456788",
                                        "deliveryStatus": "MessageWaiting"
                                }, {
                                        "address": "tel:+00123456789",
                                        "deliveryStatus": "MessageWaiting"
                                }
                        ],
                        "resourceURL": "<Resource URL>"
                },
                "senderAddresses": [{
                                "senderAddress": "3456",
                                "senderName": "ApplicationOne"
                        }, {
                                "senderAddress": "123456789",
                                "senderName": "ApplicationOne"
```

```
                    }
            ],
            "outboundSMSTextMessage": {
                    "message": "Hello World"
            },
            "clientCorrelator": "123456",
            "receiptRequest": {
                    "notifyURL":
 "http://application.example.com/notifications/DeliveryInfoNotification",
                    "callbackData": "some-data-useful-to-the-requester"
            },
            "resourceURL": "<Resource URL>"
        }
 }
```

Note: The HTTP 201 response shows that the message was created.

1.2.1   Response Parameters

The Location header field shows the URI of the created message, including the senderAddress and requestID in the path. You can append '/deliveryInfos' to this URI to query the delivery status of an SMS.

The response should include all original request parameters as listed in the request.

Parameter name	Description	Usage
address	(string) Outbound message destination address.	Mandatory
deliveryStatus	DeliveryStatus. Indicates the delivery result. See section 2.2.1.1.1 DeliveryStatus	Mandatory

2 Query the delivery status of a SMS

HTTP Method	GET
Operation	Query the delivery status of an SMS which has been sent from your application.

2.1   Request

```
GET <Send SMS URL>/{senderAddress}/requests/{requestId}/deliveryInfos
Accept: application/json
Authorization: Bearer <access key>
```

2.1.1   Request Parameters

Parameter name	Description	Usage
requestId	This identifies the specific SMS delivery request.This was returned by the **Send SMS** response..	Mandatory

2.2   Response

```
HTTP / 1.1 200 OK
Content - Type: application/json
Date: Thu, 04 Jun 2009 02:51:59 GMT
{
        "deliveryInfoList": {
                "deliveryInfo": [{
                                "address": "tel:+00123456788",
                                "deliveryStatus": "MessageWaiting"
                        }, {
                                "address": "tel:+00123456789",
                                "deliveryStatus": "MessageWaiting"
                        },
                ],
                "resourceURL": "<Resource URL>"
        }
}
```

2.2.1   Response Parameter

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

Parameter name	Description	Usage
resourceURL	(URL) This is a reference to this response.	Mandatory
deliveryInfo	(deliveryInfo type) The delivery information.	Mandatory

2.2.1.1   deliveryInfo Type

Parameter name	Description	Usage
address	(String) Outbound message destination address.	Mandatory
deliveryStatus	Indicates the delivery result. See section 2.2.1.1.1 DeliveryStatus	Mandatory

2.2.1.1.1 DeliveryStatus

DeliveredToTerminal	Successful delivery to terminal.
DeliveryUncertain	Delivery status unknown, e.g. because it was handed off to another network
DeliveryImpossible	Unsuccessful delivery; the message could not be delivered before it expired
MessageWaiting	The message is still queued for delivery. This is a temporary state, pending transition to one of the preceding states.
DeliveredToNetwork	Successful delivery to the network enabler responsible for routing the SMS

3 Subscribe to SMS delivery notifications

Create Outbound Subscriptions

HTTP Method	POST
Operation	Start subscribing to delivery status notifications for all your sent SMS

3.1   Request

```
POST <SMS API URL> /outbound/subscriptions
Host:  <HOST>
Content - Type: application/json
Accept: application/json
Authorization: Bearer <access key> {
        "deliveryReceiptSubscription": {
                "callbackReference": {
                        "callbackData": "12345",
                        "notifyURL":
"http://application.example.com/notifications/DeliveryInfoNotification"
                },
                "senderAddresses": [{
                                "senderAddress": "3456",
                                "operatorCode": "MNO1",
                                "filterCriteria": "Vote"
                }, {
                                "senderAddress": "123456789",
                                "operatorCode": " MNO2",
                                "filterCriteria": "Vote"
                }, {
                                "senderAddress": "6789",
                                "operatorCode": " MNO3",
                                "filterCriteria": "Vote"
                }
                ]
        }
}
```

3.1.1   Request Parameters

Parameter name	Description	Usage
callbackData	(string) is a function name or other data that you would like included when your application is notified. This is sent within the **callbackReference** object	Optional
notifyURL	(URI) which will be used by the ApigateHub Exchange to POST the notifications to you, so include the URL of your own listener application. This is sent within the **callbackReference** object	Mandatory
senderAddresses		
senderAddress	(string) the short code assigned to the API counsuming application by the Mobile Network Operator. This short code might differ from operator to operator for the same application.	Mandatory
operatorCode	(string) The operator unique identifier. This will be provided by the ApigateHub Exchange to the application owner	Mandatory
senderName	(string) is the URL-escaped name of the sender to appear on the terminal is the address to whom a responding SMS may be sent.	Optional

filterCriteria	(string) service provider specific filter criteria that are used in routing the message to your application. The matching shall be case-insensitive.	Mandatory if senderAddress is shared.

3.2   Response

```
HTTP / 1.1 201 Created
Content - Type: application / json
Location:  <Delivery Notification URL>
Date: Thu, 04 Jun 2013 02: 51: 59 GMT{
        "deliveryReceiptSubscription": {
                "callbackReference": {
                        "callbackData": "12345",
                        "notifyURL":
"http://application.example.com/notifications/DeliveryInfoNotification"
                },
                "senderAddresses": [{
                                "senderAddress": "3456",
                                "operatorCode": "MNO1",
                                "filterCriteria": "Vote",
                                "status": "Created"
                }, {
                                "senderAddress": "123456789",
                                "operatorCode": " MNO2",
                                "filterCriteria": "Vote",
                                "status": "Failed"
                }, {
                                "senderAddress": "6789",
                                "operatorCode": " MNO3",
                                "filterCriteria": "Vote",
                                "status": "Not Provisioned"
                }
                ],
                "resourceURL":
"http://example.com/smsmessaging/v1/outbound/subscriptions/sub789"
        }
}
```

3.2.1   Response Parameters

All request parameters of will be relayed in the response. Additional *resourceURL* parameter will be appended to the response.

Parameter name	Description	Usage
resourceURL	A reference URL to the request	Mandatory

Subscription Statuses

Created	The subscription is successfully created at the operator
Not Created	The subscription is failed to create at the operator
Failed	The connection to the operator failed
Not Provisioned	Failed to find the operator's endpoint URL in database

4 Delivery receipt notification sent to your notifyURL

4.1 Request

Notification for Outbound Subscription

```
POST < Delivery Notification URL >
Host: < HOST >
Content - Type: application / json
Authorization: Bearer < access key > {
        "deliveryInfoNotification": {
                "callbackData": "12345",
                "deliveryInfo": {
                        "address": "tel:+1350000001",
                        "operatorCode": "MNO1",
                        "filterCriteria": "Vote",
                        "deliveryStatus": "DeliveredToNetwork"
                }
        }
}
```

4.1.1 Request Parameters

Parameter name	Description	Usage
callbackData	(string) is a function name or other data that you would like included when your application is notified. This is sent within the **callbackReference** object	Optional
address	The Address of the recipient of the message.	Mandatory
deliveryStatus	Refer to section 2.2.1.1.1 DeliveryStatus	Mandatory
operatorCode	(string) The operator unique identifier. This will be provided by the ApigateHub Exchange to the application owner	Mandatory
filterCriteria	(string) service provider specific filter criteria that are used in routing the message to your application. The matching shall be case-insensitive.	Mandatory if senderAddress is shared among applications.

5 Stop the subscription to delivery notifications

HTTP Method	DELETE
Operation	Stop subscribing to delivery status notifications for all your sent SMS

5.1 Request

```
DELETE <SMS API URL>/outbound/subscriptions/{subscriptionID}
Accept: application/json
Host: <HOST URL>
```

5.1.1   Request Parameters

Parameter name	Description	Usage
subscriptionID	(string) as created when the delivery receipt subscription was created	Mandatory

5.2   Response

```
HTTP/1.1 204 No Content
Date: Thu, 04 Jun 2009 02:51:59 GMT
```

6 Receiving SMS

HTTP Method	POST
Operation	Retrieve SMS sent to your application (which is identified by **registrationId**).

6.1   Request

```
POST < Receive SMS URL >
Host:  < Host Address >
Content - Type: application / json
Authorization: Bearer < access key > {
        "inboundSMSMessages": {
                "registrations": [{
                                "registrationID": "3456",
                                "operatorCode": "MNO1",
                                "criteria": "Vote"
                        }, {
                                "registrationID": "123456789",
                                "operatorCode": "MNO2",
                                "criteria": "Vote"
                        }, {
                                "registrationID": "6789",
                                "operatorCode": "MNO3",
                                "criteria": "Vote"
                        }
                ],
                "maxBatchSize": "20",
                "clientCorrelator": "12345"
        }
}
```

6.1.1   Request Parameters

Parameter name	Description	Usage
maxBatchSize	Is the maximum number of messages to retrieve in this request. To retrieve the next set of messages this request has to send again with a different **clientCorrelator** . If this parameter is not included or no value has been provided, 100 maximum number of messages will be retrieved.	Optional

registrationID	(string) the short code assigned to the API consuming application by the Mobile Network Operator. This short code might differ from operator to operator for the same application.	Mandatory
clientCorrelator	(string) uniquely identifies this create subscription request. If there is a communication failure during the request, using the same clientCorrelator when retrying the request allows the ApigateHub Exchange to avoid creating a duplicate subscription.	Optional
operatorCode	(string) The operator unique identifier. This will be provided by the ApigateHub Exchange to the application owner.	Mandatory
criteria	(string) service provider specific filter criteria that are used in routing the message to your application. The matching shall be case-insensitive.	Mandatory if registrationID is shared among applications.

6.2   Response

```
HTTP / 1.1 200 OK
Content - Type: application/json
Content - Length: 12345
Date: Thu, 04 Jun 2009 02:51:59 GMT{
        "inboundSMSMessageList": {
                "inboundSMSMessage": [{
                        "dateTime": "2009-11-19T12:00:00",
                        "destinationAddress": "3456",
                        "operatorCode": "DIA",
                        "criteria": "Vote",
                        "messageId": "msg1",
                        "message": "Come on Barca!",
                        "resourceURL":
        "http://example.com/smsmessaging/v1/inbound/registrations/DIA/3456/messages/msg1",
                        "senderAddress": "+447825123456"
                }, {
                        "dateTime": "2009-11-19T12:00:00",
                        "destinationAddress": "123456789",
                        "operatorCode": "ROBI",
                        "criteria": "Vote",
                        "messageId": "msg2",
                        "message": "Great goal by Messi",
                        "resourceURL":
        "http://example.com/smsmessaging/v1/inbound/registrations/ROI/123456789/messages/ms
g2",
                        "senderAddress": "+447825789123"
                }
        ],
        "numberOfMessagesInThisBatch": "2",
        "resourceURL":
"http://example.com/smsmessaging/v1/inbound/registrations/messages",
        "totalNumberOfPendingMessages": "20",
        "clientCorrelator": "12345"
        }
}
```

6.2.1   Response Parameters

Parameter name	Description	Usage
inboundSMSMessageList	Pairs indicating thenumberOfMessagesInThisBatch. a self-referring resourceURL, and thetotalNumberOfPendingMessages awaiting retrieval from gateway storage	If there are no messages to be retrieved this element will not contain the inboundSMSMessage child element.
destinationAddress	the number associated with your service (for example an agreed short code)	Mandatory
messageId	message identifier generated by the ApigateHub Exchange	Mandatory
operatorCode	(string) The operator unique identifier. This will be provided by the ApigateHub Exchange to the application owner	Mandatory
criteria	(string) service provider specific filter criteria that are used in routing the message to your application. The matching shall be case-insensitive.	Mandatory if senderAddress is shared among applications.
message	SMS message itself	Mandatory
numberOfMessagesInThisBatch	Number of messages returned with this response	Mandatory
resourceURL	A reference URL to the request	Mandatory
totalNumberOfPendingMessages	Total number of pending messages for this application	Mandatory
clientCorrelator	(string) uniquely identifies this create subscription request. If there is a communication failure during the request, using the same clientCorrelator when retrying the request allows the ApigateHub Exchange to avoid creating a duplicate subscription.	Optional

7 Subscribe to notifications of messages sent to your application

HTTP Method	POST
Operation	Subscribe to notifications for SMS messages sent to your application

7.1   Request

```
POST <SMS API URL>/inbound/subscriptions
HTTP / 1.1
Host:  <Host URL>
Content - Type: application/json
Accept: application/json
Authorization: Bearer <access key> {
        "subscription": {
                "callbackReference": {
```

```
              "callbackData": "doSomething()",
              "notifyURL": "http://www.yoururl.here/notifications/DeliveryInfoNotification"
        },
        "destinationAddresses": [{
                    "destinationAddress": "3456",
                    "operatorCode": "MNO1",
                    "criteria": "Vote"
              }, {
                    "destinationAddress": "123456789",
                    "operatorCode": " MNO2",
                    "criteria": "Vote"
              }, {
                    "destinationAddress": "6789",
                    "operatorCode": " MNO3",
                    "criteria": "Vote"
              }
        ],
        "notificationFormat": "JSON",
        "clientCorrelator": "12345"
    }
}
```

7.1.1   Request Parameters

Parameter name	Description	Usage
callbackData	(string) is a function name or other data that you would like included when the POST is sent to your application.	Mandatory
clientCorrelator	(string) uniquely identifies this create subscription request. If there is a communication failure during the request, using the same clientCorrelator when retrying the request allows the ApigateHub Exchange to avoid creating a duplicate subscription.	Optional
notificationFormat	(string) is the content type that notifications will be sent in – the default format is JSON, values of XML or JSON can be specified	Optional
notifyURL	(URI) is the URI of your application to which notifications will be sent	Mandatory
senderAddresses		
destinationAddress	(string) the short code assigned to the API counsuming application by the Mobile Network Operator. This short code might differ from operator to operator for the same application.	Mandatory
operatorCode	(string) The operator unique identifier. This will be provided by the ApigateHub Exchange to the application owner	Mandatory
criteria	(string) service provider specific filter criteria that are used in routing the message to your application. The matching shall be case-insensitive.	Mandatory if destinationAddress is shared among applications.

7.2   Response

```
HTTP / 1.1 201 Created
Content - Type: application/json
Location:  <Subscribe Notification URL>
Content - Length: 254
Date: Thu, 04 Jun 2009 02: 51: 59 GMT{
        "subscription": {
                "callbackReference": {
                        "callbackData": "doSomething()",
                        "notifyURL": "http://www.yoururl.here/notifications/DeliveryInfoNotification"
                },
                "destinationAddresses": [{
                                "destinationAddress": "3456",
                                "operatorCode": "MNO1",
                                "criteria": "Vote",
                                "status": "created"
                        }, {
                                "destinationAddress": "123456789",
                                "operatorCode": "MNO2",
                                "criteria": "Vote",
                                "status": "created"
                        }, {
                                "destinationAddress": "6789",
                                "operatorCode": "MNO3",
                                "criteria": "Vote",
                                "status": "created"
                        }
                ],
                "notificationFormat": "JSON",
                "clientCorrelator": "12345",
                "resourceURL": "<Resource URL>"
        }
}
```

7.2.1   Response Parameters

Parameter name	Description	Usage
callbackData	callbackData passed with the request	Mandatory
resourceURL	link to the message	Mandatory
notifyURL	The URL to which the notification will be pushed to	Mandatory
clientCorrelator	(string) uniquely identifies this create subscription request. If there is a communication failure during the request, using the same clientCorrelator when retrying the request allows the ApigateHub Exchange to avoid creating a duplicate subscription.	Optional
senderAddresses		
destinationAddress	(string) the short code assigned to the API counsuming application by the Mobile Network Operator. This short code might differ from operator to operator for the same application.	Mandatory
operatorCode	(string) The operator unique identifier. This will be provided by the ApigateHub Exchange to the application owner	Mandatory

criteria	(string) service provider specific filter criteria that are used in routing the message to your application. The matching shall be case-insensitive.	Mandatory if destinationAddress is shared among applications.
status	(string) status of the subscription after sending to operator	Mandatory

Subscription Statuses

Created	The subscription is successfully created at the operator
Not Created	The subscription is failed to create at the operator
Failed	The connection to the operator failed
Not Provisioned	Failed to find the operator's endpoint URL in database

8 Receipt Notification Response (Posted to Notify URL)

When an SMS is sent to an application, if the application has created an subscription to receive sms, then the message should be posted to the notifyURL provided by the service provide in the subscription request (Refer: :)

8.1   Request

The message will be sent to the application in the following format.

```
POST <Notification URL>
Host:  <Host URL>
Content - Type: application/json
Accept: application/json
Authorization: Bearer <access key> {
        "inboundSMSMessageNotification": {
                "callbackData": "12345",
                "inboundSMSMessage": {
                        "dateTime": "2009-11-19T12:00:00",
                        "destinationAddress": "3456",
                        "messageId": "mes1234",
                        "message": "Vote for Mega Boy Band",
                        "senderAddress": "+12345678012"
                }
        }
}
```

8.1.1   Request Parameters

Parameter name	Description	Usage
dateTime	the dateTime that the message was received	Optional
destinationAddress	the number associated with your service (for example an agreed short code, see 'What do I need?' above)	Mandatory
messageId	server-generated message identifier	Mandatory
message	SMS message itself	Mandatory

resourceURL	link to the message	Optional
senderAddress	Sender's MSISDN	Optional

9 Stop the subscription to message notifications

Stop Inbound Subscription

HTTP Method	DELETE
Operation	Subscribe to notifications for SMS messages sent to your application

9.1   Request

```
DELETE <SMS API URL> /inbound/subscriptions/{subscriptionID}
Accept: application/json
Authorization: Bearer <access key>
Host: <Host URL>
```

9.1.1   Request Parameters

Parameter name	Description	Usage
subscritptionID	ID received when subscribing to message notification	Mandatory

9.2   Response

```
HTTP/1.1 204 No content
Accept: application/json
Date: Thu, 04 Jun 2009 02:51:59 GMT
```

204 indicates the subscription has been deleted

10   Response Codes & Exceptions

10.1 Response Codes

HTTP response codes are used to indicate:

200 – Success

201 – Created

204 – No Content

400 – Bad request; check the error message for details

401 – Authentication failure, check your authentication details

403 – Forbidden; please provide authentication credentials

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

405 – Method not allowed: for example you mistakenly used a HTTP GET instead of a POST

500 – The server encountered an unexpected condition. This could be wrong authentication details or limited user permission

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

10.2 Exceptions

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

serviceException and policyException share the same body: an identifier pair for the exception (messageId), a text pair to describe it consistently (text), and a variable pair to indicate any specific cause of the error (variables). The variables relate to the %1 placeholder(s) in the text.

10.2.1 Service Exceptions

A serviceException describes the reason why the service cannot accept the request. The following formatted service exceptions may be thrown if there is any service exception.

```
HTTP / 1.1 404 Bad Request
Accept: application / json{
        "requestError": {
                "serviceException": {
                        "messageId": "SVC0002",
                        "text": "Invalid input value for message part %1",
                        "variables": " mcc Value 413"
                }
        }
}
```

Following service exceptions may be thrown for **SMS** specifically**:**

Exception	Variables
SVC0280: Message too long. Maximum length is %1 characters	%1 – number of characters allowed in a message
SCV0283: Delivery receipt notification not supported	none
SVC0284: Address format is invalid. Expected format is %1	%1 - "tel:+00123456789"
SVC0285: Message Not Delivered %1	%1 – Errors occurred while sending the request for all the destinations.

10.2.2   Policy Exceptions

A policyException object means that the request syntax is valid, however an ApigateHub Exchange policy has been broken.

If a request is invalid, a policy exception is thrown:

```
HTTP / 1.1 404 Bad Request
Accept: application / json{
        "requestError": {
                "policyException": {
                        "messageId": "POL0001",
                        "text": "Unexpected Error Occurred %1",
                        "variables": " mcc Value 413"
                }
        }
}
```

The above exception may be thrown to indicate a fault relating to a policy associated with the service.