

	Datum 2018-02-21	Ref	Sidnr 1(7)
	Ansvarig Fredrik Hallgren		
Titel Service Description RECEIVE SMS REST-API			

1 INTRODUCTION

This document describes the Ballou SMS REST-API service for receiving SMS. The URL for the API is <https://smsapi.ballou.se/>.

SMS can be received using either push or poll. By using the push method the received SMS for a telephone number is pushed to a specified URL. The poll method is used to get received SMS based on an http request.

2 TELEPHONE NUMBER

A telephone number provided by Ballou is required to receive SMS with the REST API. Each telephone number is connected to a user account which is used to get the received SMS. User accounts are divided into two categories, admin users and regular users. An admin user can have several telephone numbers associated to the user account, a regular user can only have one telephone number associated.

There are telephone number of three different types.

- Single telephone number, i.e. +4673012xxxx
- Number series, i.e. +467301210*, where the star indicates that all telephone numbers according to the given following figures are connected to the user.
- Prefix word connected to an own or shared short number, i.e. the prefix word "BALLOU" connected to the shared short number 71720.

3 AUTHORIZATION

Basic authorization is used for access control, user name and password is provided by Ballou. All requests to the API shall contain a Base64-encoded authorization-header as shown below

Authorization: Basic username:password

4 BASIC INSTRUCTIONS

Telephone numbers shall be given, and are given by the service, in international format starting with + followed by country code, when it comes to response and variables. In case of telephone numbers being given in a URL the number format must be without + and *.

The service supports Unicode SMS meaning the parameter "Text" can be given in Unicode format by the service.

A received SMS is saved for 50 days by the service, after that period of time the SMS is deleted and cannot be read by anyone.

5 RECEIVE SMS USING PUSH

The service calls a given URL when an SMS is received for a telephone number.

5.1 Set URL

When the method push is used to receive SMS, a URL must be specified for each telephone number used to receive SMS. The URL can either be set by Ballou or by using the REST API.

URL is set by using the /Inbox resource and PUT with the following body.

https://smsapi.ballou.se/SmsGateway/api/v1/Inbox/telephone_number

Variable	Input	Mandatory/Optional
Telephone number	Telephone number to set the URL for	Mandatory
URL	URL (start with http:// or https://) to which the received SMS for the given telephone number shall be pushed	Mandatory

Example: Set the URL for the telephone number +46920401991.

```
PUT /SmsGateway/api/v1/Inbox/46920401991 HTTP/1.1
```

```
Host: smsapi.ballou.se
```

```
Authorization: Basic dXNlcjpwYXNzd29yZA==
```

```
Accept: application/json
```

```
Content-Type: application/json
```

```
{
  "NotificationUrl": "http://yourserver.com/InboxNotification.aspx"
}
```

The response to a successful PUT is http status code 204. If an error occurs the status code is http 400, "Bad request", followed by a response code and a description.

Example: Bad request

```
{
  "Code": 200,
  "Description": "Invalid NotificationUrl"
}
```

5.2 Receive SMS

When an SMS is received for a telephone number by the service a POST request is sent to the specified URL and user. The request contains the following variables:

Variable	Meaning
Id	Unique Id for the received SMS
To	The telephone number to which the SMS was received
From	Sender telephone number
Text	The actual message
ReceivedTime	Time when the SMS was received

When a URL isn't available at the time for the first delivery request, the service makes new delivery attempts every 15 minutes during 72 hours.

When multiple SMS have been received for a telephone number, or when several telephone numbers have the same notification URL, they will be presented in the same POST request.

Example: Delivery of a single SMS using push;

```
POST /SmsGateway/api/v1/Message HTTP/1.1
Host: smsapi.ballou.se
Accept: application/json
Content-Type: application/json

{
  "Id": "5392",
  "From": "+46701112233",
  "To": "+46920401991",
  "Text": "This is a test message!",
  "ReceiveTime": "2016-08-26T09:22:07+02:00"
}
```

Example: Delivery of multiple SMS using push;

```
POST /SmsGateway/api/v1/Message HTTP/1.1
Host: smsapi.ballou.se
Accept: application/json
Content-Type: application/json

[
  {
    "Id": 5392,
    "From": "+46701112233",
    "To": "+46920401991",
    "Text": "This is a test message!",
    "ReceiveTime": "2016-08-29T10:09:54+02:00"
  },
  {
    "Id": 5393,
    "From": "+46701112233",
    "To": "+46920401991",
    "Text": " This is another test message!",
    "ReceiveTime": "2016-08-29T10:09:54+02:00"
  }
]
```

After you have received the SMS from the service, your webserver should send http response 200 OK. This tells us that you have received the SMS and we can flag the transaction complete.

6 RECEIVE SMS USING POLL

With the poll method received SMS is stored by the service and downloaded by a user. Typically the REST API is polled regularly by the user to check for received SMS.

Poll is done by using the /Inbox/telephone number resource and GET with the following optional variables given in the URL.

<https://smsapi.ballou.se/SmsGateway/api/v1/Inbox/>

Variable	Meaning	Mandatory/Optional
Limit	Integer, specifies the maximum number of received SMS in the response	Optional
BeginId	Id to start the download from	Optional
Newer	True/False	Optional

The variables Limit, BeginId and Newer are used to limit and filter the response to a request, for example to prevent the situation of too many received SMS in the same response.

The variable Limit is used to limit the number of SMS in the response to a GET request. If the variable isn't used a maximum of 100 SMS are present in the response.

The variable BeginId is used to specify a received SMS Id that the response shall begin from. The variable is typically used in relation to the last received response where SMS Id is present. With the variable Newer in combination with the variable BeginId it's possible to specify whether the response should contain newer or older SMS than the Id set in the BeginId.

The response to a GET request contains the following variables.

Variable	Meaning
Id	Id for the received SMS
From	Sender telephone number
To	The telephone number to which the SMS was received
Text	The actual message
ReceiveTime	Time when the SMS was received

Example: Get received SMS for the telephone number +46920401991;

```
GET /SmsGateway/api/v1/Inbox/46920401991 HTTP/1.1
Host: smsapi.ballou.se
Authorization: Basic dXNlcjpwYXNzd29yZA==
Accept: application/json
```

The response is http 200 combined with an array of received SMS

```
{
  "Inbox": "+46920401991",
  "Messages": [
    {
      "Id": 5395,
      "From": "+46701112233",
      "To": "+46920401991",
      "Text": "This is an SMS received by the Ballou SMS service",
      "ReceiveTime": "2016-08-26T09:22:07+02:00"
    },
    {
      "Id": 5394,
      "From": "+46701112233",
      "To": "+46920401991",
      "Text": "This is also an SMS received by the Ballou SMS service",
      "ReceiveTime": "2016-08-26T09:20:40+02:00"
    }
  ]
}
```

Example: Get received SMS for the telephone number +46920401991 and limit the number of SMS in the response to one.

```
GET /SmsGateway/api/v1/Inbox/46920401991?limit=1 HTTP/1.1
Host: smsapi.ballou.se
Authorization: Basic dXNlcjpwYXNzd29yZA==
Accept: application/json
Content-Type: application/json
```

The response is http 200 combined with an array of received SMS, in this case only one.

```
{
  "Inbox": "+46920401991",
  "Messages": [
    {
      "Id": 5395,
      "From": "+46701112233",
      "To": "+46920401991",
      "Text": "This is an SMS received by the Ballou SMS service",
      "ReceiveTime": "2016-08-26T09:22:07+02:00"
    }
  ]
}
```

Example: Get received SMS for the telephone number +46920401991 and limit the response to only give newer SMS than Id 5394.

```
GET /SmsGateway/api/v1/Inbox/46920401991?BeginId=5394&Newer=True HTTP/1.1
Host: smsapi.ballou.se
Authorization: Basic dXNlcjpwYXNzd29yZA==
Accept: application/json
```

Content-Type: application/json

The response is http 200 combined with an array of received SMS.

```
{
  "Inbox": "+46920401991",
  "Messages": [
    {
      "Id": 5395,
      "From": "+46701112233",
      "To": "+46920401991",
      "Text": "This is an SMS received by the Ballou SMS service",
      "ReceiveTime": "2016-08-26T09:22:07+02:00"
    }
  ]
}
```

7 LIST TELEPHONE NUMBERS

It's possible to list all telephone numbers that are associated with a user account.

The listing is done by using the /Inbox resource and GET.

<https://smsapi.ballou.se/SmsGateway/api/v1/Inbox/>

The response to the GET request contains an array with the following variables.

Variable	Meaning
Inbox	Telephone number
NotificationURL	Notification URL used for push received SMS

Example: List the telephone numbers associated with a user

```
GET /SmsGateway/api/v1/Inbox/ HTTP/1.1
Host: smsapi.ballou.se
Authorization: Basic dXNlcjpwYXNzd29yZA==
Accept: application/json
```

The response is http 200 combined with an array of received SMS.

```
{
  "Inboxes": [
    {
      "Inbox": "+46920401991",
      "NotificationUrl":
        "http://yourserver.com/MolFacades/DebugInboxNotification.aspx"
    }
  ]
}
```

8 DELETE INBOX

It's possible, and recommended, to delete inbox items after they have been downloaded with poll or received by push.

Inbox items are deleted by using DELETE in the /Inbox resource together with telephone number and Id to delete.

Example: Delete SMS Id 5395 in the inbox +46920401991

```
DELETE /SmsGateway/api/v1/Inbox/46920401991/5395 HTTP/1.1  
Host: smsapi.ballou.se  
Authorization: Basic dXNlcjpwYXNzd29yZA==  
Accept: application/json  
Content-Type: application/json
```

The response is http status code 204.