HTTP Access
Description

Contents

1. Introduction

This document describes eCall HTTP/HTTPS access. eCall's HTTP access allows you to open a URL directly, in order to send messages to various call systems.

2. Requirements

To allow you to send messages via the HTTP interface, the following conditions must be met:

- You must have a business account with eCall (business package). A standard account (private package) is adequate for testing (30 days)
- You must activate the HTTP interface in your eCall account
- Your software must be able to open a URL to send messages.

3. Message Formats

Messages can be sent using GET or POST. The following rules must be followed here:

- All parameters consist of a command word (ID) and the associated, desired value.
- Message elements are separated from each other by the "&" character (compulsory for GET, also for POST where the content type involves "application/x-www-form-url-encoded")
- ID and value are separated by an equals sign "="
- The ID's are case-insensitive (i.e. upper/lower case does not matter)
- All characters must be transferred using UTF8 encoding. In addition, the characters must be URL encoded (e.g. "%20" or "+" for a space).

Example:

https://url.ecall.ch/api/sms?username=maxmuster&password=s3cr3t&address=0041791234567&message=Dies%20ist%20ein%20Test

Note: For performance reasons, account settings parameters are cached by the HTTP interface. Hence, changes in the settings may only take effect in the HTTP interface with a certain delay.

3.1. Sending text messages

- **Function**

Api/Sms   Function for a text message:

- **Required Parameters**

UserName   Account username or self-created API credentials (*Interfaces > Overview*)

Password   User password.

Address   Complete pager or mobile number (in international format),

or several numbers, separated by a semicolon,

or the name of a person or group which is defined in the eCall account address book.

Note: When the first invalid address is found, the checking process and further processing will be cancelled.

Message   Text which is to be sent.

The maximum length is determined in the account settings *(Account Settings > SMS > Maximum number of pages).* Text which is longer than allowed by the settings will be truncated.

- **Optional Parameters**

JobID   Unique message identification indicated by the client.

A maximum length of 50 characters will be accepted. If the value is longer, it will be truncated.

SendDate   If the job Send Date and Time defines that it should be sent later, it should be defined in ISO 8601 format (e.g. in the format "YYYY-MM-DDThh:mm:ss±hh:mm")

Note: If a time zone is not indicated, eCall will use the local time zone. UTC can be indicated with "Z" as well as "+00" or "+00:00".

Example for time zone UTC+3: 2019-08-01T10:09:00+03:00

Example for time zone UTC: 2019-08-01T10:09:00Z

- **Extended functions**

NotificationAddress   Address for forwarding a notification (e.g. confirmation of receipt). Maximum length is 100 characters.

Possible values:

- Mobile number (e.g.: 0041791234567)
- Email address (e.g. john.template@example.com)
- URL (e.g.: https:/www.example.com/notifcations.asp)

Values may also be combined, where the individual values are separated by a semicolon ";" as long as the maximum length is not exceeded e.g.: 0041791234567;0041781234567;john.template@example.com

Note: The validation will fail at the first invalid address found, and processing of the request is aborted.

Under Receiving replies to a SMS *there is a description of what a reply message via URL looks like*

NotificationLevel   Value indicating when a confirmation of receipt is desired.

Possible values:

- 0 – (Default) Confirmation of receipt only when a receipt status is present.
- 1 – Confirmation of receipt once the last possible monitoring point has been reached.
- 2 – Send confirmation of receipt as per Value 1, and when the job is still not sent after a number of seconds*.

  * duration determined by the telecom provider.
- 3 – Send confirmation of receipt when the job could not be sent, i.e. in the case of sending errors or timeout when contacting the end device.

CallBack   Sender, up to 16 numeric or up to 11 alphanumeric characters.

Answer   Recipient addresses for forwarding an SMS response can be defined here.

Possible values: *(see Parameter NotificationAddress)*

Note: If the "Answer" parameter is also sent, the "CallBack" value is ignored.

MsgType   Transfer possibility for a certain information type.

Valid types:

- Normal – Default
- Flash – Flash-SMS

- PrioSMS+ – a Flash and a "Normal" SMS

NoLog   With this parameter you can prevent messages from showing up in the log book. Valid values are "1" or "0" (default).

- **Examples**

/Api/Sms?Address=%2B41791112233&Message=Hello%20World&Username=xxx&Password=yyy

/Api/Sms?Address=%2B41791112233&Message=Hello%20World&Username=xxx&Password=yyy&CallBack=%2B41791234567

/Api/Sms?Address=%2B41791112233&Message=Hello%20World&Username=xxx&Password=yyy&MsgType=Flash&NoLog=1

Note: At most 1530 characters (GSM encoding, normal case), respective 1570 characters (UCS-2 encoding) are allowed per message. As there are only 160 characters available in a SMS, it may be necessary to split the message into several partial messages (pages). At most 10 pages are allowed. For the receiver's device to be able to re-assemble these partial messages into the original message, the respective data is included in each page. This reduces the number of characters available per page for the actual message by 7 (GSM encoding), respectively by 3 (UCS-2 encoding).

3.2. *Sending fax messages*

- **Function**

Api/Fax	Function for a fax message.

- **Required Parameters**

UserName	Account username or self-created API credentials (*Interfaces > Overview*)
Password	User password.
Address	Complete fax number (in international format), or several numbers, separated by a semicolon, or name of a person or group, which is defined in the address book of the eCall account.
Message	Fax message text

- **Optional Parameters**

JobID	Unique message identification indicated by the client. A maximum length of 50 characters will be accepted. If the value is longer, it will be truncated.
SendDate	If the job is to be sent in the future this parameter defines the date and time it should be sent in ISO 8601 format (e.g. in the format "YYYY-MM-DDThh:mm:ss±hh:mm") **Note:** If a time zone is not indicated, eCall will use the local time zone. UTC can be indicated with "Z" as well as "+00" or "+00:00". **Example for time zone UTC+3:** 2019-08-01T10:09:00+03:00 **Example for time zone UTC:** 2019-08-01T10:09:00Z

- **Extended functions**

CallingNumber	Sender number (international format)
Subject	Title of the message. Added on the coversheet.
HeaderId	Sender's header. Added at the top of each page.
HeaderInfo	Header for info. Added beside the HeaderId on each page.

NumberOfRetries   Maximum number of repeated attempts. Default value is 0, there is only one attempt to execute the job.

RetryIntervalInMinutes Time between retries in minutes.

- **Examples**

/Api/Fax?Address=%2B41447873071&Message=Test+message&Username=xxx&Password=yyy

/Api/Fax?Address=%2B41447873071&Subject=Test&Message=Test+message&Username=xxx&Password=yyy&FromText=%2B41431234576&SendDate=2019-12-20T20:50:00&JobID=123AB

3.3. Sending voice messages

- **Function**

Api/Voice   Function for a voice message.

- **Required Parameters**

UserName   Account username or self-created API credentials (*Interfaces > Overview*)

Password   User password.

Address   Complete recipient number (in international format).

Message   Voice message text

- **Optional Parameters**

JobID   Unique message identification indicated by the client.
A maximum length of 50 characters will be accepted. If the value is longer, it will be truncated.

SendDate   If the job Send Date and Time defines that it should be sent later, it should be defined in ISO 8601 format (e.g. in the format "YYYY-MM-DDThh:mm:ss±hh:mm")
Note: If a time zone is not indicated, eCall will use the local time zone. UTC can be indicated with "Z" as well as "+00" or "+00:00".
Example for time zone UTC+3: 2019-08-01T10:09:00+03:00
Example for time zone UTC: 2019-08-01T10:09:00Z

- **Extended Functions**

Language   Defines the language in which the text will be read. The parameters for language are as follows:

- **DE** for German
- **FR** for French
- **IT** for Italian
- **EN** for English

Default: Language will be identified automatically using content.

FromText   Name of client to be read after the message.

- **Examples**

/Api/Voice?Address=%2B41447873070&Message=Testmitteilung&Username=xxx&Password=yyy

/Api/Voice?Address=%2B41447873070&FromText=Hans%20Muster&Message=Testmitteilung&Username=xxx&Password=yyy&Language=FR&SendDate=2019-12-20T20:50:00&JobID=123

3.4. Status query

Besides the possibility to be informed of the status of a message via notification (parameter "NotificationAddress" in the send request) it is also possible to query the status of a specific message (by "JobID") or of all messages within a specified time interval.

3.4.1. Status query for a particular message

- **Function**

Api/State	Function for a query of the current status.

- **Required Parameters**

UserName	Account username or self-created API credentials (*Interfaces > Overview*).
Password	User password.
JobID	Unique message identification of the original job as indicated by the client.

- **Example**

/Api/State?Username=xxx&Password=yyy&JobID=1234ABCD

3.4.2. Status query for a space of time

- **Function**

Api/State	Function for a query of the current status.

- **Required Parameters**

UserName	Account username or self-created API credentials (*Interfaces > Overview*).
Password	User password.
StartDate	Start date and time of the **original jobs** for which the status shall be returned.
EndDate	End date and time of the **original jobs** for which the status shall be returned.

Note about StartDate and EndDate: If a time zone is not indicated, eCall will use the local time zone. UTC can be indicated with "Z" as well as "+00" or "+00:00".

Example for time zone UTC+3: 2019-08-01T10:09:00+03:00

Example for time zone UTC: 2019-08-01T10:09:00Z

- **Example**

/Api/State?Username=xxx&Password=yyy&StartDate=2019-12-01T10:00:00&EndDate=2019-12-01T13:00:00

Note: If the number of status objects found for a [start date, end date] interval exceeds 1000, HTTP status code «bad request» (HTTP status codes) and eCall result code 11701 are returned (

eCall ResultCodes).

3.4.3. Answer structure for a state query

The structure is in XML format. For several statuses ([Status query for a space of time](#)), several <Status> elements are grouped below the <Statuses> root element.

Structure for a query (content omitted)
```
<Statuses>
      <Status>
              <StatusCode></StatusCode >
              <StatusText></StatusText >
              <TimeStamp></TimeStamp>
              <Address></Address>
              <JobID></JobID>
      </Status>
      <Status>
              ….
      </Status>
</Statuses>
```

The value of «StatusCode» is determined according to the following tables:

3.4.3.1. Status codes text messages

SMS / Pager		
Status Code	**Status Text**	**Description**
-1	Unkown	Status unknown.
99	Scheduled	Scheduled transmission time.
0	Transmitting	Transmitting.
1	Ok	Transmission OK.
3	Waiting for result	Transmitting. Waiting for status response.
8	Ok (confirmed)	Transmission OK (reception confirmed).
9	Ok (waiting for confirmation)	Transmission OK (reception not yet confirmed, waiting to deliver message).
10	Ok (not confirmed)	Transmission OK (reception of confirmation failed).
71	Not accepted by gateway	No «job accepted» message from gateway.
1000	Disconnected	Connection cancelled.
1001	Timeout	Timeout: The message could not be sent.
3020	Connection refused	The connection was refused by the remote host.
5111	Text too long	The text is too long.
5112	Invalid number	Invalid number.
5120	Message invalid	Destination call number is a tone call number: Message invalid.
5121	Invalid char in number	Destination call number is invalid: Invalid character.

SMS / Pager		
Status Code	**Status Text**	**Description**
5155	Too much traffic	Too much traffic.
5164	Call system troubled	Call system troubled.
5502	Syntax error	Message from provider: Syntax error.
5504	Too many messages	Message from provider: Operation not allowed - Maximum messages for the address exceeded.
5506	ADC invalid	Message from provider: Analog-to-digital converter invalid.
5509	Invalid number	Invalid call number.
5510	Too many messages for same receiver	Too many messages for same receiver from this account.
5511	Too many messages with same content for same receiver	Too many messages with same content for same receiver from this account.
5512	Duplicate job id	This job ID has already been used by this sender.
5513	Exists in the blacklist	Callback, address or parts of the content are blacklisted
5514	Blocked by out-bound filter rule	Blocked by out-bound filter rules

− Table: Status Codes SMS / Pager

3.4.3.2. Status codes voice messages

Voice		
Status Code	**Status Text**	**Description**
30	Transmitting	Message is being transferred to voice system.
31	Ok	Message successfully transferred to voice system.
32	Failed	Transfer of message to voice system was not successful.
33	Played	Message played successfully.
34	Played with feedback	Message played successfully and feedback received.
35	Invalid number	Message with invalid phone number.
36	Played with receipt	Message reception confirmed.
37	Connection timed out	No connection within defined time range.
38	In progress	Receiver is being called.
39	Next try in 15 min	Receiver could not be reached, retry pending.

− Table: Status Codes Voice

3.4.3.3. Status codes fax messages

Fax		
Status Code	**Status Text**	**Description**
41	Ok	Fax message successfully transmitted.
43	Waiting	Transmission waiting.
44	New job	Request newly issued.
101	Applied	Job group successfully assigned to gateway,
201	Started converting	Started converting.
202	Finished converting	Single file converted.
301	Started merging	Merging documents of fax message.
401	Processing	Fax message is being processed.
402	Finished processing job	Processing single job finished.
501	Finished processing job group	Processing job group finished.
5513	Exists in the blacklist	Callback, address or parts of the content are blacklisted
6000	Unknown error	Unknown error.
6002	Conversion error	Error converting the documents.
6004	No response	No response.
6005	Empty job	Error: Empty order. Cannot create JobID.

Fax		
Status Code	**Status Text**	**Description**
6006	Line busy	Line busy.
6007	Rejected	Call rejected.
6009	Unknown number	Unknown call number.
6010	Invalid number	Invalid call number.
6011	Number changed	Number changed.
6013	No fax device	The receiver is not a fax device.
6014	Disconnected by sender	Connection dropped by sender.
6015	Disconnected by receiver	Connection dropped by receiver.
6016	File format not supported	File format not supported.
6017	File access failed	No access to file.
6900	Ok (not confirmed)	Transmission ok, connection dropped by receiver.

− Table: Status Codes Fax

3.5. Message Buffer

For the commands GetNextMessage and DeleteMessage, the buffer must be activated on the website. Only then the incoming messages will be written into the memory. Messages already received cannot be incorporated retrospectively. The memory can be set up under *Account Settings > Virtual mobile number > 3. Forward SMS's received (optional)* as a forwarding option.

3.5.1. Query for new messages

This command reads the oldest message received on a leased SMS number. In addition, a unique identification number is also delivered, which can be re-used for deletion from the buffer.

As an option, the leased mobile phone number can be indicated. In this case, the oldest message sent to this number is returned. If this option is missing, the oldest message for all numbers leased by this account is returned.

- **Function**

Api/Cache/GetNextMessage   Function for reading the next message from the buffer

- **Compulsory Parameters**

UserName   Account username or self-created API credentials (*Interfaces > Overview*)

Password   User password.

- **Optional Parameters**

MobileNumber   Leased SMS number in international format (e.g.: 0041763332020) or in national format (e.g.: 0763332020).

- **Examples**

/Api/Cache/GetNextMessage?Username=xxx&Password=yyy

/Api/Cache/GetNextMessage?Username=xxx&Password=yyy&MobileNumber=+41763331111

- **Reply for GetNextMessage**

The reply structures here are no longer based on the HTTP status code, rather they have an XML structure as their basis.

Structure (without content)

```
<IncomingSMS>
        <Result>
                <ResultCode></ResultCode>          (as per paragraph Error Codes)
                <ResultText></ResultText>          (Description of the error code)
        </Result>
        <MessageID></MessageID>                    (→ Use to delete the message)
        <SMS>
                <Message></Message>
                <AddressTo></AddressTo>            (internat. format)
                <AddressFrom></AddressFrom>        (internat. format)
                <TimeStamp></TimeStamp>            (Format: dd.mm.yyyy hh:mm:ss)
        </SMS>
</IncomingSMS>
```

Note: If there is no message in the message buffer, the ResultCode 11204 is returned (no new incoming message present") and the SMS and MessageID nodes are NOT shown.

3.5.2. Delete messages from the buffer

This command deletes the message from the buffer, but not from the account. The message is still visible on the website at "Messages received".

- **Function**

Api/Cache/DeleteMessage   Function for deleting a message from the buffer

- **Compulsory Parameters**

UserName   Account username or self-created API credentials (*Interfaces > Overview*)

Password   User password.

MessageID   ID of a message received from the function *GetNextMessage* ([Status query for a particular](#))

- **Examples**

/Api/Cache/DeleteMessage?UserName=xxx&Password=yyy&MessageID=123abc

- **Reply for DeleteMessage**

This reply structure describes whether a message was successfully deleted from the buffer. It looks like this:

Structure (without content)

```
<DeleteMsg>
      <Result>
            <ResultCode></ResultCode>
            <ResultText></ResultText>
      </Result>
</DeleteMsg>
```

3.6. Receiving replies to a SMS

- **Function**

Answer   Reply message function.

- **Compulsory Parameters**

AddressTo   Recipient number

AddressFrom   Sender number

Message   Content of the reply

                      Note: Windows-1252 encoding is used for the message.

TimeStamp   Time of receipt (dd.mm.yyyy hh:mm:ss).

- **Optional Parameters**

JobID   Contains the unique identification of the message if it was included in the sending job.

- **Read confirmation**

You should respond with HTTP status code 200 OK to confirm that you successfully received the reply.

- **Example**

http://www.example.com/answers?Function=Answer&AddressTo=0041766012999&AddressFrom=0041791234567&Message=My+Reply&TimeStamp=11%2E12%2E2015+10%3A37%3A00

3.7. Notification message

- **Function**

Notification   Notification message function.

- **Required Parameters**

ResultCode   Status code of the message (as shown in the notification table).

ResultText   Status in plain text (as shown in the notification table).

Number   Contains the recipient number for this notification.

TimeStamp   Contains the receipt time for the sent message (dd.mm.yyyy hh:mm:ss).

- **Optional Parameters**

JobID   Contains the unique identification of the message if it was supplied when sending the job.

- **Read confirmation**

You should respond with HTTP status code 200 OK to confirm that you successfully have received the notification message.

- **Example**

http://www.example.com/notifcations?Function=Notification&ResultCode=0&ResultText=Message+has+been+delivered&TimeStamp=1Z%2E07%2E2014+12%3A55%3A15&Number=0041787557539&JobID:FB551638-A320-476F-A47D-F2EE68

3.7.1.Notification result codes

ResultCode	ResultText	Description
0	Message has been delivered	Receipt of the forwarded message was confirmed by the recipient.
1	Message has been buffered	Receipt of the forwarded message was confirmed by the recipient.
2	Message has not been delivered	Receipt of the forwarded message could not be confirmed.
3	Error Code / Error Message	Defines the error on transfer to the corresponding central point.
4	Transmission OK	The send job was forwarded to the corresponding central point.

− Table: Notification Result Codes

3.8. Forwarding received SMS to HTTP

In the eCall web portal, under the settings where SMS numbers can be rented, there is the option to have incoming SMS forwarded to an HTTP(S) address. The structure of such a forwarding is described in this chapter.

In addition, the URL that is to be called by eCall in the case of a received SMS must be stored in the web portal (e.g.: https://mycompany.com/incoming/sms). eCall supplements this URL with various parameters (GET call - POST is not possible). The following parameters are included:

Function	always contains **IncomingSMS**
AddressTo	The SMS was received on this eCall reception number. The forwarding was stored for this number.
AddressFrom	Sender number. The SMS was sent from this number.
Message	Content of the received SMS.
TimeStamp	Time of receipt in the eCall system. The format corresponds to the following pattern: "DD.MM.YYYY HH:MM:SS".

Since all parameters are included in the URL, special characters are coded accordingly. For example, a space is coded with "%20", a colon with "%3A".

- **Example:**

…?AddressFrom=0041799999999&AddressTo=0041766666666&Function=IncomingSMS&Message= Yes%2C%20noon%20is%20ok.&TimeStamp=01.01.2020%2012%3A00%3A00

würde bedeuten

Function	`IncomingSMS`
AddressTo	`0041766666666`
AddressFrom	`0041799999999`
Message	`Yes, noon is ok.`
TimeStamp	`01.01.2020 12:00:00`

4. Reply codes

There are two types of reply codes. For message dispatch, the status is returned directly as an HTTP status code and additional ResultCodes, while for operations with the buffer, only the eCall ResultCodes will be returned.

4.1.   HTTP status codes

HTTP Status codes are used when sending jobs, (Chapter 3.1 to 3.3).

Status codes 4xx generally indicate a client error and 5xx indicate a server error.

The following codes may be returned:

Status code	Status text	Description
200	OK	Job received successfully
500	InternalServerError	General error during processing
400	BadRequest	This code is returned for various reasons. Please refer to the eCall ResultCodes table below.
401	Unauthorized	The credentials used are unknown or missing (Username/Password)
403	Forbidden	Insufficient points available on the account

−   Table: HTTP Status Codes

For querying messages, status code 200 (OK) is returned. The operation executed is described in the body text using an XML (For structure, see Message Buffer). The ResultCodes from are used for this.

4.2. eCall ResultCodes

Code	ResponseText	Description
0	OK	The message was sent
11000	SyntaxError	Syntax error
11001	PermissionDenied	Access denied
11100	AdrAdCInvalid	Invalid or incorrect recipient address
11101	AdrNAdInvalid	Invalid or incorrect confirmation address
11102	AdrAdCMissing	Missing recipient address
11103	AdrNAdMissing	Missing notification address
11104	AdrAdCTooMany	Too many recipient addresses transmitted
11105	AdrAdCNotAllowed	Recipient address not within defined area
11200	MsgNoCharacters	No message existent
11201	MsgInvalidCharacters	Invalid characters in the message
11202	MsgSendTimeInvalid	Invalid sending time given
11203	MsgSendTimeNotAllowed	Sending time is not within time window
11204	MsgTooLong	SMS/Pager only: Message is too long. In this case you have to check the setting „maximum number of pages for long messages" in eCall.
11300	AccNoUser	Unknown User
11301	AccNoUnits	Not enough credits in account
11303	AccNoFreeUnits	Not enough free credits in account
11400	CallSystemInvalid	Invalid call system
11401	CallSystemInvalidForUser	Invalid call system for this user
11402	CallSystemNotSupported	Call system is not supported
11403	CallSystemConfused	Call system is temporarily out of order
11500	IDMissing	ID is missing
11501	IDInvalid	ID could not be found
11502	IDDoesNotExist	ID does not exist in the system
11600	StateAlreadyTransmitted	Message was already transmitted
11700	DataReadError	Data contents could not be read
11800	CBMsgError	Callback contains a forbidden number or text
11810	AnswerInvalid	Answer parameter contains an invalid address
11904	Too many attachments	Too many attachemts uploaded (max. 10 allowed)
11905	Attachment(s) too large	At least 1 attachment is too large. Max. size for attachments is 5 MB

11906	File type not supported	File type is not supported as attachment. The following types are supported by eCall: bmp, pdf, doc, rtf, ppt, dok, snp, gif, tif, tiff, html, txt, jpg, wir, jpeg, xls, zip
11907	Error while processing the attachments	There was an unexpected internal error while processing the attachments
11908	Error while saving the attachments	There was an unexpected internal error while saving the attachments.
11910	Job not found in Log	Job could not be found in the log
11911	JobID required	In a job status request you have to submit a JobID
11912	Job is scheduled	Job is not executed yet but scheduled
11913	Job in progress	Job is currerntly in progress
11914	Attachment name exceedes char limit	The name of the attachment is too long
11999	Unknown error	Unknown error

– Table: Result Codes

5. Connections

5.1. Access addresses for sending jobs

The URL access for eCall is as follows:

https://url.ecall.ch/

The service is only available over an encrypted connection using TLS 1.2.

5.2. IP addresses for replies or notifications (eCall to client)

Source IP Address: 193.93.208.200
                       193.93.208.149
                       193.93.208.153

Source port: undefined (open; 0 to 65535)

6. Access test

You can use your web browser for a simple access test. Please note the requirements for access use. In addition, you must know if your username and password are set up for identification.

1. Open your browser.

2. Type the URL below into the address bar of your browser.

   https://url.ecall.ch/api/sms?username=maxmuster&password=s3cr3t&address=0041791234567&message=Dies%20ist%20ein%20Test

   https://url.ecall.ch/Api/Sms?Address=%2B41791112233&Message=Test&Username=foo&Password=bar

   Please note that you must replace the values for "Username", "Password" and "Address" with your own details.

3. You will receive a reply as described in Reply codes

7. Table directory