

# Transactional-Email Interface Specification

MailSolution - Version 2.3

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# Sending Transactional-Email messages using the HTTP protocol

## General syntax and service endpoint

All requests can be sent via the HTTP protocol using the following service endpoint URL:

<http://sysmail.fagms.net/c/tm>

Request parameters can be submitted using either HTTP/POST or HTTP/GET mechanism.

## Authentication

Authentication is mandatory for each request on a per interface basis. For each request the requesters IP address is checked against the backend settings for the target interface identifier. These settings can be maintained using the MailSolution frontend. It is possible to define one or more IP addresses and/or IP address ranges to permit access for.

## HTTP Request

### Methods

To upload data and parameters to the service three methods are possible.

1. HTTP1.1/GET with url-encoded parameters
2. HTTP1.1/POST using Content-type: application/x-www-form-urlencoded
3. HTTP1.1/POST using Content-type: multipart/form-data



## Request parameters

The following request parameters are mandatory for each request.

Evaluation of request parameters is case sensitive.

Field	Description	Type
ACTION	Action identifier defines the action to be performed	Enumerated type. The only valid value at the current stage of development is "SYSTEM".
AID	MailSolution interface identifier. Defines the interface to be used to assemble the outgoing message.	Numeric
email	Recipient's mailbox address. Just the local part and the domain part.	Alphanumeric; According to RFC822 Address specifications.
[unique key]	This is the field that represents the unique key of your Profiletype. This is usually "email", which means that you do not have to add it as an additional parameter. But it could be any parameter (e.g. "customerID").	Depends on the field.
[FROM]	Optional parameter to specify the sender mailbox address manually.	Alphanumeric; According to RFC822 Address specifications.
[FROM_ALIAS]	Optional parameter to specify the sender mailbox name of the address. To use this option, the previous parameter 'FROM' must be specified in advance.	Alphanumeric
[REPLY_TO]	Optional parameter to specify the Reply-To mailbox address manually.	Alphanumeric; According to RFC822 Address specifications.
[REPLY_TO_ALIAS]	Optional parameter to specify the Reply-To mailbox name of the address. To use this option, the previous parameter 'REPLY_TO' must be specified in advance.	Alphanumeric

Any other parameter is user defined. The Transactional-Email interface detects and replaces placeholders in the messages content upon dispatch of the message. The user may pass any key-value parameter. If using conditioned text or contents, it is important that the referring placeholder name in the message content is defined as a field within the associated profiletype.



## Reserved keywords

The following keywords are reserved and may not be used as placeholders or parameters in link-urls, otherwise linktracking may not work correctly.

- "ACTION"
- "UID"
- "EMID"



## Attachments

It is possible to append attachments to the outgoing message on the fly. This can be achieved by uploading a file together with other request parameters using HTTP1.1/POST with submission method Content-Type: "multipart/form-data".

More than one attachment per message is possible. Each file to be attached to the outgoing message must be provided as a single multipart body of the request, having a Content-disposition header with parameter "name" beginning with the character sequence "systemmail\_attachment".

The total size for attachments must not exceed the maximum size of 2 MBytes (2,097,152 bytes).

See the following example request for details:

```
POST /c/tm HTTP/1.1
Host: sysmail.fagms.net
Content-Type: multipart/form-data; boundary=-----xyzzy
Content-Length: ???
-----xyzzy
Content-Disposition: form-data; name="ACTION"

SYSTEM
-----xyzzy
Content-Disposition: form-data; name="AID"
???
-----xyzzy
Content-Disposition: form-data; name="email"
support@cheetahmail.de
-----xyzzy
Content-Disposition: form-data; name="systemmail_attachment_1";
        filename="somefile.pdf"
Content-Type: application/pdf

%PDF-1.4
...
<file data>
-----xyzzy--
```



## HTTP Response

### HTTP Status Codes

HTTP Status	Content	Description
200	text/xml	Request has been accepted. The request result is given by generic HTTP headers and the HTTP request result content.
400	text/xml	Bad request. The request has been rejected due to an error or inconsistency in the request parameters.
500	none, text/xml	The request was rejected due to a system error. In case of a subsequent system error that occurred after the request was accepted, EMSTATUS and EMSTATUSCODES are set according to the following description. If the request was rejected by the receiving webserver itself, no additional error codes are available.

### Generic HTTP headers

Response codes are returned to the caller in two ways. The first alternative is the usage of generic HTTP headers. The second alternative uses the HTTP response content (see next section). The following table explains names and values of the generic headers.

Name	Content	Description
EMSTATUS	Enumerated text	Is set to one of the following literals: SUCCESS, WARNING, ERROR
EMSTATUSCODES	Alphanumeric	Comma separated list of response codes. Codes with a leading '-' sign indicate errors, codes with leading '+' sign are used to indicate a successful transaction and codes having neither '+' or '-' indicate a warning.





## Response codes

### Error codes

Code	Text	Description
-110	BAD_PH_SYNTAX	Placeholder syntax error during placeholder replacing.
-103	COUNT_PARAGRAPH	The supplied number of parameters (fields or tempfields) does not match the supplied _count number of a paragraph.
-102	INCOMPLETE_PARAGRAPH	An end tag (##Paragraph_End##) was not found for all start tags (##Paragraph_Start##).
-101	RECURSIVE_PARAGRAPH	The same paragraph – identified by its name – was found within itself. This would lead to an endless loop and is thus forbidden.
-95	ATTACHMENT_TOO_BIG	Supplied attachments must not exceed a total maximum size of 2 MBytes (2097152 bytes).
-94	BAD_CONDITION	Condition syntax error during condition replacing.
-93	UNKNOWN_CONTENT	At least one of the messages contents contains content placeholders   Content_n  , where n refers to a content block that has been removed from the system.
-92	RECURSIVE_CONTENT	Content-in-content loop detected. Dynamic content may not contain contents of a higher level. If such "recursive" content is detected, message creation fails.
-91	DELETED_CONTENT	The message contains one or more   Content_n   placeholders that refer to deleted or non-existent customer Contents.
-90	NO_CONTENT	The message does not have any content. Both Transactional-Email HTML and PLAIN contents are empty.
-83	NO_SMS_PROVIDER	The interface is trying to send a sms, but no sms provider is set.
-82	BAD_FROM_ALIAS	The messages From: mailbox alias contains irregular characters (e.g. linebreaks or control characters).



-81	BAD_FROM	The messages From: mailbox address is invalid.
-80	NO_FROM	The messages From: mailbox address could not be resolved.
-71	XVER_MISMATCH	Requesting external version mismatch with the interface configuration.
-70		Not used / reserved
-60		Not used / reserved
-54	SMS_BOUNCE	It is not possible to dispatch the sms to the desired recipient because the recipient MSISDN is marked as a global sms bounce within the profiletype.
-53	MEMBER_HARDBOUNCE	It is not possible to dispatch messages to the desired recipient because the recipient mailbox address is marked as a global hardbounce within the profiletype.
-52	MEMBER_BLACKLISTED	It is not possible to dispatch messages to the desired recipient because the recipient mailbox address is blacklisted.
-51	MEMBER_COMPLAINT	It is not possible to dispatch messages to the desired recipient because the mailbox address is registered as a complaint recipient address.
-50		Not used / reserved
-41	NOT_GRANTED	Recipient given by either 'email' or 'sms' parameter is not granted. This error only occurs when using the interface in test mode and the recipient is not whitelisted.
-40	NOT_ALLOWED	Authorisation failed, remote IP check failed.
-31	UNSUPPORTED	Unsupported feature used.
-30	MAINTENANCE	The Transactional-Email service is disabled due to system maintenance.
-25	UNKNOWN_NETWORK	The Network is not known within the system.
-24	UNKNOWN_FIELD	A ##Field_?## placeholder refers to an unknown request parameter.
-23	UNKNOWN_INTERFACE	The AID (interface identifier) is not known within the system.



-22	CONFIGURATION	Sender and/or reply interfaces are not configured to be used with the transactional mail interface.
-21	BAD_AID	The AID parameter is not resolvable.
-20	AID_NOT_FOUND	The AID (interface identifier) given is not known within the system.
-11	CONNECTION_CLOSED	Lost connection to client during the request.
-10	SYSTEM_ERROR	Indicates a system error.
-9	BAD_FAX	The 'fax' parameter is not valid.
-8	NO_FAX	The 'fax' parameter is missing.
-7	BAD_SMS	The 'sms' parameter is not valid.
-6	NO_SMS	The 'sms' parameter is missing.
-5	ERR_BAD_EMAIL	The 'email' parameter syntax is not a valid mailbox address.
-4	NO_EMAIL	The mandatory parameter 'email' is missing.
-3	NO_ACTION	The mandatory parameter 'ACTION' is missing.
-2	NO_RED	Not used / reserved
-1	NO_AID	The mandatory parameter 'AID' is missing.



## Warning codes

Code	Text	Description
1		not used / reserved
2	EMPTY_HTML	The message's HTML content is empty.
3	EMPTY_PLAIN	The message's plain content is empty.
4	NO_REPLY_TO	Unresolved Reply-To: mailbox address.
5	EMPTY_SMS	The message's SMS content is empty.
6	BAD_REPLY_TO	The messages 'Reply-To' mailbox address is not valid.
7	IGNORED_COMPLAINER	The warning is set if the transactional interface is set up to ignore complaint checks upon dispatch. In regular cases the interface returns -51 if the transactional message recipient can be found on the list of complaint recipients.
8	IGNORED_PRIO	The warning is set if the transactional interface is configured so that the priority of delivery has changed due to the request.
9	IGNORED_BLACKLIST	The warning is set if the transactional interface is set up to ignore blacklist checks upon dispatch. In regular cases the interface returns -52 if the transactional message recipient can be found on the list of blacklisted recipients.
30	NO_RETURN_PATH	Unresolved Return-Path: mailbox address.
31	BAD_RETURN_PATH	The messages 'Return-Path' mailbox address is not valid.

## Success codes

Code	Text	Description
+10	EMAIL_SENT	Email enqueued successfully.
+11	SMS_SENT	SMS enqueued successfully.
+12		Not used / reserved
+13	BCC_SENT	One or more blind copies of the message were enqueued for BCC: recipients.



## Response content

For each request that the system was able to receive, a response content of content-type text/xml is returned along with the HTTP result. It has the following elements:

Element	Description
systemmail_result	Root element
emstatus	Same meaning as the generic header EMSTATUS
emstatuscodes	Same meaning as the generic header EMSTATUSCODES
emsvpid	MailSolution transaction identifier for the request

## Response Example

The following is a response example send back by the Transactional-Email interface to the requester.

```
HTTP/1.x 200 OK
Date: Mon, 17 Nov 2008 08:41:46 GMT
Server: Apache/2.0.59
EMSTATUS: SUCCESS
EMSTATUSCODES: +10,+13
Content-Length: 225
Connection: close
Transfer-Encoding: chunked
Content-Type: text/xml; charset=ISO-8859-1

<?xml version="1.0" encoding="ISO-8859-1"?>
<systemmail_result>
  <emstatus>SUCCESS</emstatus>
  <emstatuscodes>+10,+13</emstatuscodes>
  <emsvpid>121-24823</emsvpid>
  <emguid>XOKUTIMW7PHBBNNK</emguid>
</systemmail_result>
```



## **Sending Transactional-Emails in batches**

Transactional batch Email is a special kind of Transactional Email, which is used if you want to send Transactional Emails to a group of recipients instead.

Typical examples for transactional batch Emails are weekly account summaries in social networks.

### **General syntax and service endpoint**

Transactional batch Emails works similar to “regular” transactional Emails. But instead of submitting one HTTPS request after another, all requests (represented by their GET URL) are put together within an XML file and then put on the MailSolution SFTP server.

The MailSolution SFTP server is available at:

**[sftp://upload.fagms.net](ftp://upload.fagms.net)**

The folder into which each XML file must be positioned is called:

**[./batchmail/](#)**

After the execution of an XML file, a file with one result per GET URL line is put into the folder:

**[./batchmail/log/](#)**

Please contact the Experian Cheetahmail Deutschland support to receive a valid login to the SFTP server.



## Batch filename and compressed files

Batches are uploaded as XML documents. See description below for details on the XML syntax. To assert proper detection of batchfiles, the filename must match the following rules:

- i) The filename has the suffix “-batch”
- ii) The filename has one of the extensions [".xml", ".xml.gz", ".zip"]

To upload a compressed file use either gzip (GNU zip, LZ77, Huffman) or Windows style PKZIP archives.

## XML file description

The XML file contains all parameters which are needed to send the Transactional batch Emails. Find below the list of tags within the XML file plus an example.

Field	Description	Type
<name>	An identifier for the current batch. Does not have to be unique.	Alphanumeric
<unique_id>	The name of the unique key field of your Profiletype. Usually “email”.	Depends on the field.
<respond_to>	An optional Email address to be informed about a completed job.	According to RFC822 Address specifications.
<add_columns>	Optional space separated list of additional fieldnames that shall be appended in the batch result file.  “UID” is a reserved keyword that may be used to refer to the transactional messages unique identifier as provided by MailSolution.  “AID” is a reserved keyword to refer to the interface ID used with the request.  “PID” is a reserved keyword to refer to the profiletype ID used with the request.	Literal
<data>	All GET request parameters; one per line, URL encoded. Lines have to be separated by single newline characters (UNIX style).	Literal



## XML file example

```
<?xml version="1.0" encoding="iso-8859-1"?>  
<!DOCTYPE batch SYSTEM "http://admin.fagms.net/batchmail.dtd">  
<batch>  
  <name>20091111111111111111-batchname</name>  
  <unique_id>email</unique_id>  
  <respond_to>max.sample@cheetahmail.de</respond_to>  
  <add_columns>UID gender</add_columns>  
  <data><![CDATA[  
    AID=123&ACTION=SYSTEM&email=email1@cheetahmail.de&name=John&gender=male  
    AID=123&ACTION=SYSTEM&email=email2@cheetahmail.de&name=Michael&gender=male  
    AID=123&ACTION=SYSTEM&email=email3@cheetahmail.de&name=Lisa&gender=female  
  ]]>  
</data>  
</batch>
```

## Result file example

The batch result file contains the processing status of the single request contained in the batchfile. Each request status is reported in a single line, using a number of space separated values. Lines in the request result file are separated by UNIX newline characters.

The structure of each line is as follows:

Number	Description
1	The linenumber according to the input file.
2	The value of the request parameter as defined by the <unique_id> element in the batchfile. This value is embraced by double quote characters "<value>". If <unique_id> is undefined in the batchfile, "-" is shown.
3	The request processing status according to EMSTATUS. This is one of the following literals "SUCCESS", "WARNING" or "ERROR".
4	Additional status codes as defined by EMSTATUSCODES. This value is always embraced by double quote characters.
5	Space separated list of values according to the <add_columns> element in the batchfile. Values are quoted and occur in the same order as defined in the <add_columns> element. If <add_columns> is undefined in the batchfile, no values are shown in the result.





This result file example shows a possible content according to the batchfile form above.

```
1 <empty>
2 "email1@cheetahmail.de" SUCCESS "+10" "AB5ROLO5SFGKV7PJ7BRA" "male"
3 "email2@cheetahmail.de" SUCCESS "+10" "M3NBOENNSFGCDHTZMYEQ" "male"
4 "email3@cheetahmail.de" ERROR "-51" "B6AROIZBIFGJZ6BXS6NQ" "female"
```

Note that empty lines in the batchfile are always reported using the token “<empty>”.



# Setting up a new Transactional-Email

## Step-by-step example

The following email is an example for the purchase confirmation Email, which we are going to create:

Betreff: Thank you for your Purchase (1234658)



**Thank you for your purchase**

Simple personalisation

Hello Max Sample,  
this is your purchase confirmation.  
You purchased:  
Position 1: 2,50 CD-Rom  
Position 2: 5 Euro T-Shirt

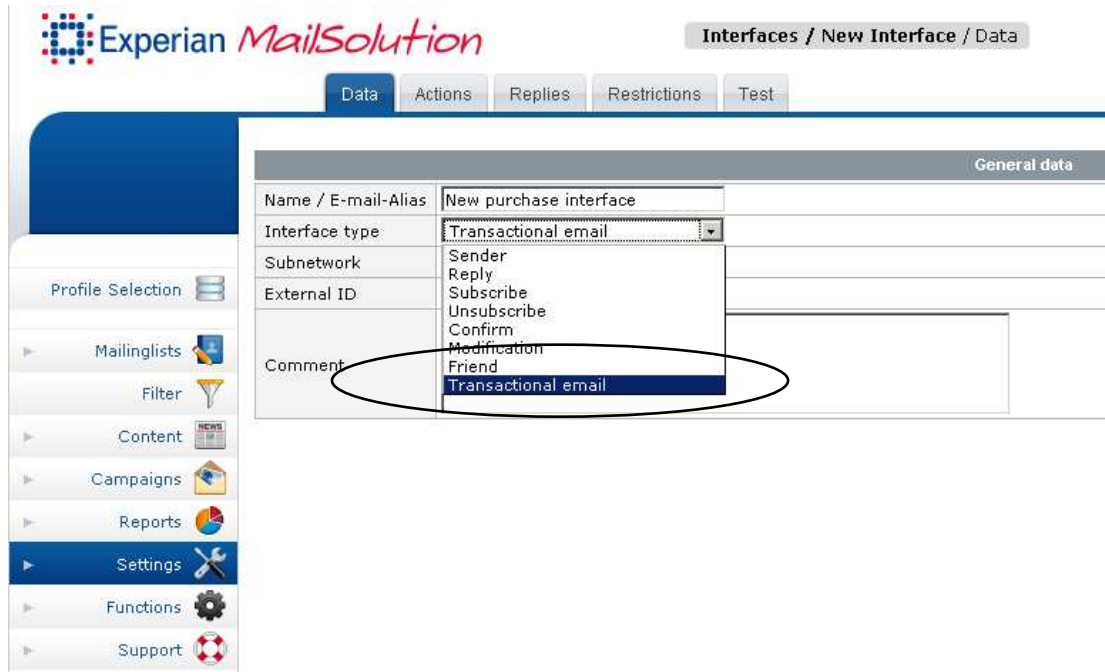
Random paragraph personalisation

Best regards,  
Your Experian Marketing Services Team



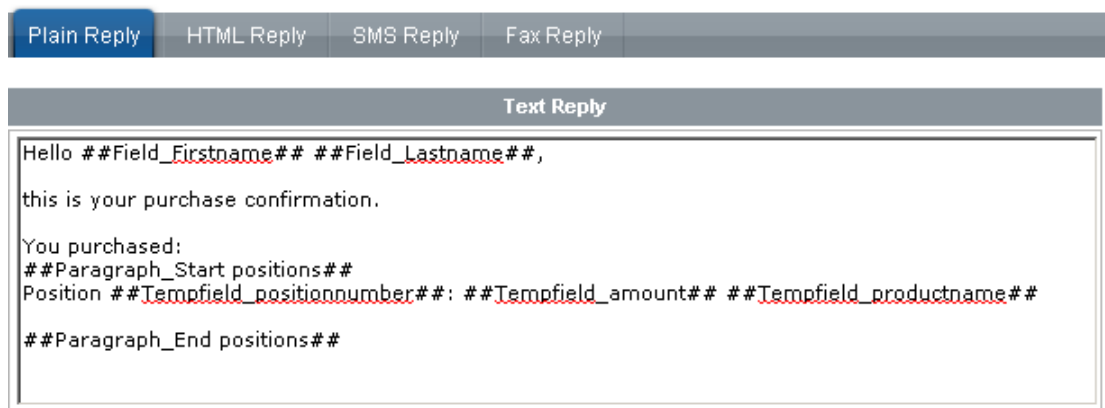
## 1. Creating a new Interface in the frontend

Set up a new Interface of type “Transactional email” in the MailSolution frontend under Settings -> Interfaces -> New.



## 2. Creating the Content

Now create the content with all dynamic placeholders. You can find that dialogue in the Content section of an Interface.





### 3. Test the created Interface

If you have created the interface, you are able to test it in the Test section. Fill out the fields and click “generate URL”. Then you are ready to start the test dispatch with the generated URL.

The screenshot shows the 'Test' section of a software interface. At the top, there are tabs for 'Data', 'Replies', 'Restrictions', and 'Test', with 'Test' being the active tab. Below this, there are sub-tabs for 'Content', 'Test Dispatch', and 'Rollout', with 'Test Dispatch' being the active sub-tab. The main content area is divided into several sections:

- Source of Content for the test dispatch:** Two radio buttons are present: 'Live content from tab "Replies"' (selected) and 'Test'.
- Fields, Tempfields and Paragraphs which were found in the content:** A form with several input fields:
  - E-mail address to send to: support@cheetahmail.de
  - firstname: Max
  - lastname: Sample
  - positions: A table with one row containing a dropdown menu with '1', an 'Add' button, and a 'Delete' button.
  - positionnumber: 1
  - amount: 2,50
  - productname: CD-Rom
  - OrderID: 1234658
- URL example:** A text area containing a long URL: `http://sysmail.fagms.net/c/tm?AID=12345&ACTION=SYSTEM&email=support@cheetahmail.de&firstname=Max&lastname=Sample&positions_count=2&positionnumber0=1&amount0=2,50&productname0=CD-Rom&positionnumber1=2&amount1=5 Euro&productname1=T-Shirt&OrderID=1234658`
- At the bottom of the URL example section, there are two buttons: 'Generate URL' and 'Send'.

### 4. Saving the Interface

After pressing the complete button, you will find the new Interface in the list of interfaces.

ID	Alias	E-Mail Adresse	Typ
30986	New purchase interface	[N/A]	Transaktions-E-Mail

Here you will find the ID of the new Interface, which needs to be specified in the HTTP request as described in section 1. The value of the ID is 30986 in this case.



## 5. Calling the Interface

And here is the sample HTTP request, which leads to the resulting example Email on page 10 above, by populating the placeholders indicated in subchapter 2.

```
http://sysmail.fagms.net/c/tm?AID=12345
&ACTION=SYSTEM
&email=support@cheetahmail.de
&OrderID=1234658
&firstname=Max
&lastname=Sample
&positions_count=2
&positionnumber0=1&amount0=2,50&productname0=CD-Rom
&positionnumber1=2&amount1=5%20Euro&productname1=T-Shirt
```

Sending to this address

There are 2 paragraphs

These are the values for the first paragraph