

# **Integrating Fax Sending Services Using SMTP API (mail to fax)**

## **DEVELOPER GUIDE**

**Enabled by Popfax**

**We recommend developers to register as Popfax.com API's services users by sending an email to the address:**

**[register \[AT\] api.popfax.com](mailto:register@api.popfax.com)**

**As a registered user you will receive information with all features, modifications and updates of the products.**

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## **1 General Description**

This document describes how developers can include fax sending functionality into their application by integrating Popfax Mail to Fax service (**mail2fax**). This service enables registered Popfax users to send a document by fax to multiple recipients (up to 500). A fax is sent to a fax machine by sending a specially formatted email to the address [mail2fax@popfax.com](mailto:mail2fax@popfax.com).

## **2 How to Initiate Service**

In order to send a fax from an email box via the Popfax service it is necessary to register for an account with Popfax and with the “mail to fax” option. Please consult [www.popfax.com](http://www.popfax.com), choose from the various options and activate your account (don't forget to select a subscription with mail to fax option enabled).

## **3 Authentication**

User authentication is based on login (it is the user registered email) and password. You must send your mail2fax e-mails from the same email address as used for logging onto the system. The subject matter will contain your password. The password is provided to you at service activation to [www.popfax.com](http://www.popfax.com). The password can be retrieved from the ‘My Account’ area by selecting the mail to fax menu. The same page will also allow clients to generate a new password.

## 4 Mail Format Specification

In order to benefit from the mail2fax service it is important to keep to one of the following e-mail options:

### Option 1

```
To: mail2fax@popfax.com
From: Client <client@company.com>
Subject: <token received from Popfax System>
Body:
<Destination Number 1>
<Destination Number 2>
...
<Destination Number N>
[/ID_<NUMBER>]
[/ACK]
[/DITHERING]
[/TAB]
[/ATTACHMENT]
Attachment(s): <filename.ext>
```

OR

### Option 2

```
To: <DestinationNumber1>@mail2fax.popfax.com , <Destination Number
2>@mail2fax.popfax.com , .. , <DestinationNumberN>@mail2fax.popfax.com
From: Client <client@company.com>
Subject: <token received from Popfax System>
Body:
[/ID_<NUMBER>]
[/ACK]
[/DITHERING]
[/NOREPORT]
Attachment(s): <filename.ext>
```

**IMPORTANT:** Do not mix the formats. If the message does not correspond to one of the options, it will be rejected.

## 4.1 Supported Mail Formats

**mail2fax** service accepts e-mails with content in simple text or in html format.

## 4.2 Destination Address

Mail2fax service may be reached at two types of email addresses :

- [mail2fax@popfax.com](mailto:mail2fax@popfax.com)
- <Destination Number 1>@mail2fax.popfax.com; <Destination Number 2>@mail2fax.popfax.com; ...; <Destination Number N>@mail2fax.popfax.com

Where <Destination Number i> is a fax destination number indicated in international format. The correct destination address at which mail2fax service may be accessed depends on the fax destination numbers indication method.

Please refrain from combining these methods. Such requests will be treated by system as incorrect format.

## 4.3 Mail Subject

Mails sent to the service shall contain in their “Subject” field only the password obtained from Popfax system. It is important to present it without additional information. This password is unique to each customer and **it is different from the account password** (it can be found in the “mail to fax” section of your account)

## 4.4 Fax Content

The fax content will be added to the email as an attachment. You can attach more than one file to the email. All attachments will be considered as the content of the fax to be sent and will be merged into a single fax.

## 4.5 Supported Document Types

The list of supported document types includes Text Documents (TXT), Adobe Portable Document Format (PDF), Microsoft Office (DOC, DOCX, XLS, XLSX, PPT, PPTX), Open Office (ODT, SXW, ODS, ODP), Rich Text Format (RTF), graphical format (BMP, TIFF/TIF, GIF, JPG/JPEG) and PostScript (PS, EPS).

This list is regularly updated; please refer to <http://www.popfax.com/index.php?pop=faq#a6> for the latest version of supported document types.

## 4.6 Destination Number List

There are two options to define your destination number list. Both methods allow fax sending to multiple destination numbers. The mail2fax service currently accepts up to 500 numbers:

### Option 1

Fax destination numbers are indicated in the email body. Each number must be indicated in a separate line in an international number format.

### Option 2

Destination numbers are indicated in the Send To: field in the following format:

```
<Destination Number 1>@mail2fax.popfax.com, <Destination Number  
2>@mail2fax.popfax.com, ..., <Destination Number N>@mail2fax.popfax.com
```

**IMPORTANT:** Do not mix the formats. If the message does not correspond to one of the options, it will be rejected.

Examples for each fax destination numbers indication method may be found in Annex 3. For more details please refer to <http://www.popfax.com/index.php?pop=faq#a4>.

## 4.7 Special Tags

Special tags may be used in the message body to provide some additional information.

### Customer ID Tag

Popfax recommends that the Customer ID tag is used to identify each mail2fax service request. The ID will correctly identify the status of each of the messages sent. Every report or notification sent back to a **mail2fax** client will contain this ID. Customer ID tag shall be placed in the message body in a separate line as **/ID\_<NUMBER >**, where NUMBER is actual identifier.

### Acknowledge Receipt Tag

The optional **/ACK** tag may be used to request confirmation that the e-mail has been delivered to mail2fax service, analyzed and placed in the processing queue. Please refer to Chapter 5.1 Service Acknowledgement Message for more details.

### Dithering Tag

This optional tag might be placed in mail body, in a separate line as **/DITHERING**. It is designed to enable client control of fax quality.

The default configuration (when the tag is not used) is set for black and white threshold, which gives superior readability of text documents, especially for color text.

If the tag is specified, the colors in the document will be dithered, which offers superior quality

for pictures and logos. However, this method may reduce color text readability and the page will take longer to transmit (as result, it may be charged as two or more pages)

## Report formatting Tag

This optional tag might be placed in the mail body, in a separate line as **/TAB**. It is designed to enable client to control of fax reporting format. The default configuration (when the tag is not used) is set for "Line format" for sending to single fax sending. When a fax is sent to more than one destination, the fax transmission report is in "Table format".

When the tag **/TAB** is inserted in the mail2fax, the fax transmission report is in "Table format" whichever number of fax are sent.

## Attachment Tag

This optional tag might be placed in the mail body, in a separate line as **/ATTACHMENT**. It is designed ask for fax attachment in the fax transmission report.

When this tag is detected, the faxed document (conversion in fax layout of the mail2fax attachments) is encapsulated in PDF and attached to the transmission report.

The default configuration (when the tag is not used) is set for transmission report mail without attachment.

## Transmission Report Tag

This optional tag might be placed in the mail body, in a separate line as **/NOREPORT**. It is designed to disable transmission report by email.

The default configuration (when the tag is not used) is set for transmission report enabled (transmission report is send by mail).

When the tag **/NOREPORT** is inserted in the mail2fax, the fax transmission report does not come via email (TX status is visible in the online account).

**Important:** Additional tags may be available in future versions, please consult with Popfax Customer Care.

## 5 Faxes Monitoring

In order to track the status of service requests, the customer is offered two types of notification: Service Acknowledgment Message and Fax Sending Status Report. These notifications are sent by e-mail to the customer's e-mail address. Each message starts with the ID tag set by customer in a separate line, i.e. `ID_<NUMBER>`.

If a problem is detected during request processing, the system either, sends back an error message with a code and description of the error, or informs the customer of message format errors that have prevented further request processing. For example, 'authentication error', 'incorrect destination faxes numbers', 'no attachments', etc.

All messages are sent with:

```
Content-Type: text/html; charset=utf-8  
Content-Transfer-Encoding: quoted-printable
```

### 5.1 Service Acknowledgement Message

A confirmation message is sent back to customer for each request that was received by the system right after it has passed pre-qualification. This type of notification confirms that the request has been received, verified and passed for implementation

**Format:**

```
/ID_<NUMBER>[new line marker]  
(OK) [space]Your request was accepted for processing.[new line marker]
```

**Example:**

```
/ID_123  
(OK) Your request was accepted for processing
```

**Important:** please note that for security reasons, if sender's email address is not registered in the system then the mail2fax service does not send any feedback to the request.

## 5.2 Fax Sending Status Report

The Fax sending status report contains information concerning the: sending status for each destination number, billing detail per number, errors encountered during fax sending, etc.

### Format 1 Table representation:

```
/ID_<NUMBER>[new line marker]
Date-time of transmission[TAB]Number[TAB]Pages[TAB]OK/ERR_type[TAB]
Cost(EUR)[new line marker]
<Date&time1>[TAB]<destination number1>[TAB]<number of
pages1>[TAB]<status1>[TAB]<cost value1>[new line marker]
<Date&time2>[TAB]<destination number2>[TAB]<number of
pages2>[TAB]<status2>[TAB]<cost value2>[new line marker]
...
<Date&timeN>[TAB]<destination numberN>[TAB]<number of
pagesN>[TAB]<statusN>[TAB]<cost valueN>[new line marker]
Total cost:[space]<total cost value>[space]EUR[new line marker]
[new line marker]
NEW CREDIT STATUS OF YOUR ACCOUNT:[space]<new account credit
value>[space]<currency>[new line marker]
(States used in the mail and their description are appended at the end)
```

Where N is the quantity of destination numbers.

### Example 1:

```
/ID_123
Date-time of transmission      Number      Pages OK/ERR_type Cost (EUR)
2006-10-16 09:56:16           +33123456789      3      OK      0.15
2006-10-16 09:58:09           +39123456789      3      OK      0.15
2006-10-16 09:58:09           +37322589282      2      BU      0.00

Total cost: 0.30 EUR

NEW CREDIT STATUS OF YOUR ACCOUNT:      92.75 EUR

OK - Fax sent
```

**Important:** Please refer to Annex 1 for complete list of Fax Sending Statuses

### Format 2 Line by line (for one destination faxes only):

```
/ID_<NUMBER>[new line marker]
Date-time of transmission[space]:[space]<Date&time1>[new line marker]
Number[space]:[space]<destination number1>[new line marker]
Pages[space]:[space]<number of pages1>[new line marker]
OK/ERR_type[space]:[space]<status1>[new line marker]
Cost(<currency>)[space]:[space]<cost value1>[new line marker]
```

```
[new line marker]
NEW CREDIT STATUS OF YOUR ACCOUNT:[space]<new account credit
value>[space]<currency>[new line marker]
[new line marker]
(States used in the mail and their description are appended at the end)
```

### **Example 2:**

```
/ID_123
Date-time of transmission : 2007-07-26 19:53:31
Number : +37322897006
Pages : 1
OK/ERR_type : OK
Cost(Units) : 1

NEW CREDIT STATUS OF YOUR ACCOUNT: 2779 units

OK - Fax sent
```

Where N is the quantity of destination numbers.

## **5.3 Error Message**

When there are errors during request processing, the system will send an e-mail with the error code and description.

### **Format**

```
/ID_<NUMBER>[new line marker]
(<error code>)[space]<error message>[new line marker]
```

### **Example:**

```
/ID_123
(103) Recipient list is too big, i.e.> 500
```

The full list of error codes and error description is provided in Annex 2.

**Important:** Please note that the description is given in the customer's preferred language, while the code allows developer to create multi-language support in the customer application.

## 6 Mail2fax Extensions

### 6.1 Mail Merge

#### Service Description

A mail merge is a method of taking data from a structured source and inserting it into a template document. It results in as many faxes to send as rows in the data source. It requires two files, a data source and a template. These two files are processed and sent to the fax server.

#### Mail Format Specification

Authentication relies on “From:” and “Subject” fields, as previously described.

A mail merge email is identified by the “To:” field. At the moment all mail merge emails are sent to [mailmerge@popfax.com](mailto:mailmerge@popfax.com). Any email which is sent to this address is considered as mail merge.

#### Fax Content

The mail must contain two files

- a data source
- a template file

At the first stage of mail merge validation are checked the following:

1. The existence of valid data source and template file
2. The existence of the special column tag in the data source file
3. The existence of recipients in the under the special column tag, named POPFAX

#### Data Source Supported Formats

At the moment only Excel and CSV formats are supported:

- CSV files data source must be ASCII encoded with CRLF or LF lines
- Excel files data source must contain a single tab

The data source must contain a column with a defined name; from that column the destination numbers are extracted.

## **6.2 Cover Page**

### Service Description

A cover page is a customized header page that contains the sender and recipients details. It relies on configurable data, available in the customer's account management, and some content written in the body of the email.

### Mail Format Specification

Authentication relies on "From:" and "Subject" fields, as previously described.

If a cover page is required, the customer specifies a "To:" field in the following way <recipient\_number>@coverpage.popfax.com.

The body of the email is considered as the core text of the cover page. This text is limited to fit a A4 page, which correspond approximately to 36 lines of 80 characters.

### Tag Description

A **/END** tag is introduced to discard any text that will follow it. It permits to limit the content of the cover page cutting trailing signature that may appear in email.

## **7 Technical Support**

All Popfax customers are welcome to contact our customer service via the online contact form. Our team will make its best efforts to satisfy all requests.

## Annex 1. Fax Send Status

The following table presents all status codes and their description:

Code	Status	Description
OK	OK	Fax sent
NF	No fax machine answering	Call answered and fax communication tone sent repeatedly for approx. 30 seconds. If no fax response detected, the communication is stopped.
IN	Invalid number	NO communication ever established. The number called is reported as invalid.
BU	Busy line	No communication established. The line is reported as busy.
CR	Call rejected	No communication ever established. The call is reported as rejected, by the signaling network.
NA	No answer	No communication ever established. The call has no response for 1-2 minutes.
BA	Bad line	Communication established, handshake success but the error rate is too high and the communication is aborted. Fax not sent. Occurs especially when ECM is used on VERY bad line.
CF	Fax connection failed	Communication established, but the fax handshake failed due to bad line or nonstandard fax machine or other communication problems.
IT	Incomplete transmission	Fax is not sent till the end. Not all pages are sent due to unexpected disconnection, of remote fax abort that is not reported as such.
RF	Remote fax aborted	Fax sending incomplete. Not all pages sent due to unexpected disconnection caused by remote fax abort.
FA	Failure	General purpose failure caused by non-reported errors from the system line, manual fax cancellation or whatever error that is not explicitly specified.
LP	Line problem	NO communication ever established. Generated by fax sending management level system on E1 line problem.
CE	Conversion error	NO communication ever established. Dummy error code used only for mail2fax. The conversion of the attached document failed.
CS	File cannot be sent	NO communication established. Generated by the transport level system on file corruption.
SB	System busy	NO communication ever established. Generated by the transport level system on overload.

## Annex 2. System Messages

The table below presents the messages currently supported by **mail2fax** service:

Message	Comments
(101) Invalid destination number list	One of the destination numbers is not valid. Details of valid numbers can be found: <a href="http://www.popfax.com/index.php?pop=faq">www.popfax.com/index.php?pop=faq</a>
(102) No attachment	No supported format attachment was detected, please consult <a href="http://www.popfax.com/index.php?pop=faq">www.popfax.com/index.php?pop=faq</a>
(103) Too many recipients list	Recipient list is too big, i.e.> 500
(104) No credit	Not enough credits to send the fax. Please recharge your account
(105) Conversion error	Because of a conversion problem the document cannot be sent. File name: [document name].
(106) Unsupported file type	One of attachments has an unsupported file type. Supported file types can be found at <a href="http://www.popfax.com/index.php?pop=faq">www.popfax.com/index.php?pop=faq</a> . File name: [Document name]
(107) Authentication error	While inserting your parameters (token and/or email), please refrain from inserting spaces or other characters (e.g. hour ,date etc.)
(108) Empty destination number List	Recipient list is empty / no valid destination number was found (please refer to <a href="http://www.popfax.com/index.php?pop=faq">www.popfax.com/index.php?pop=faq</a> for assistance).
(109) Your mail was accepted	This message is sent when ACK tag has been inserted in mail2fax message and confirms that system has accepted the service request
(110) Internal system error, please try again. If problem persist, please contact Customer Care	A problem appeared while processing your request. Please repeat your attempt. In case of a persistent problem please report this to Customer Care.
(111) In order to be able to send "Mail to Fax" we kindly ask you to use one of the following mails: mail2fax.popfax.com or <a href="mailto:recipient's number@mail2fax.popfax.com">recipient's number@mail2fax.popfax.com</a>	There are two styles of destination numbers mixed in the mail2fax request. Please use only one of the indicated formats.
(112) Multiple files assembling failure, please try again. If the problem persists, please contact Customer Care	A problem appeared while assembling multiple files for transmission. Please repeat your attempt. In the case of a resistant problem please report this to Customer Care
(113) Attachments exceed the 8MB limit	The total size of the attachment should not exceed 8MB per one mail2fax request

Mail merge extension error codes

<b>Message</b>	<b>Comments</b>
(301) Inconsistent data source	Bad data source: <ul style="list-style-type: none"><li>• the data source file is not supported (not csv or xls)</li><li>• the data source is corrupted</li><li>• the data source does not contain the special tag</li></ul>

## Annex 3. Mail Example

### Option 1. Faxes Sent to mail2fax@popfax.com

```
From client@company.com  Fri Oct 13 14:18:17 2006
Return-Path: <client@company.com>
X-Original-To: mail2fax@popfax.com
Date: Fri, 13 Oct 2006 04:17:28 -0700 (PDT)
From: customer@company.com
Subject: SID8kjhdsfa72adf3fd
To: mail2fax@popfax.com
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary="0-342502496-1160738248=:13920"
Content-Transfer-Encoding: 8bit

--0-342502496-1160738248=:13920
Content-Type: text/plain; charset=iso-8859-1
Content-Transfer-Encoding: 8bit
Content-Id:
Content-Disposition: inline

+33123456789
+33123456799
+44123456789
+39123456789
/ID_123
/ACK
/TAB
/ATTACHMENT

--0-342502496-1160738248=:13920
Content-Type: text/plain; name="test.txt"
Content-Description: 2968862769-test.txt
Content-Disposition: inline; filename="test.txt"

Hello world.
--0-342502496-1160738248=:13920-
```

Option 2. Faxes Sent to <Destination Number>@popfax.com

```
From client@company.com  Fri Oct 13 14:18:17 2006
Return-Path: <client@company.com>
X-Original-To: mail2fax@popfax.com
Date: Fri, 13 Oct 2006 04:17:28 -0700 (PDT)
From: customer@company.com
Subject: SID8kjhdsfa72adf3fd
To: +33123456789@mail2fax.popfax.com , +33123456799@mail2fax.popfax.com ,
+44123456789@mail2fax.popfax.com, +39123456789@mail2fax.popfax.com
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary="0-342502496-1160738248=:13920"
Content-Transfer-Encoding: 8bit

--0-342502496-1160738248=:13920
Content-Type: text/plain; charset=iso-8859-1
Content-Transfer-Encoding: 8bit
Content-Id:
Content-Disposition: inline
/ID_123
/ACK
/ATTACHMENT
--0-342502496-1160738248=:13920
Content-Type: text/plain; name="test.txt"
Content-Description: 2968862769-test.txt
Content-Disposition: inline; filename="test.txt"

Hello world.
--0-342502496-1160738248=:13920-
```

## Annex 4. Example of Send Fax Codes

### Option 1. Faxes Sent to mail2fax@popfax.com

#### **C++**

```
#include <string>
using namespace std ;
int main()
{
    string command( "echo \"+33123456789\" | nail -s SIDewerretwerhegf -r " )
;
    command.append("client@company.com -a test.pdf
mail2fax@popfax.com") ;
    system( command.c_str() ) ;
    return 0 ;
}
```

#### **Java**

```
import java.io.IOException;
class Main {
    static int main()
    {
        try {
            String command = new String( "echo \"+33123456789\" | nail -s
SIDewerretwerhegf -r client@company.com -a test.pdf mail2fax@popfax.com") ;
            Runtime.getRuntime().exec( command );}
        catch( IOException e)
        {
            System.out.println( e.getMessage() ) ;
        }
        return 0; }
}
```

#### **PHP**

```
<?php
$command = "echo \"+33123456789\" | nail -s SIDewerretwerhegf -r ";
$command .= "client@company.com -a test.pdf mail2fax@popfax.com" ;
system($command) ;
?>
```

Option 2. Faxes Sent to <Destination Number>@popfax.com

**C++**

```
#include <string>
using namespace std ;
int main()
{
    string command( "echo \"/ID_123\" | nail -s SIDewerretwerhegf -r " ) ;
    command.append("client@company.com -a test.pdf
+33123456789@mail2fax.popfax.com") ;
    system( command.c_str() ) ;
    return 0 ;
}
```

**Java**

```
import java.io.IOException;
class Main {
    static int main()
    {
        try {
            String command = new String( "echo \"/ID_123\" | nail -s
SIDewerretwerhegf -r client@company.com -a test.pdf
+33123456789@mail2fax.popfax.com") ;
            Runtime.getRuntime().exec( command );}
        catch( IOException e)
        {
            System.out.println( e.getMessage() ) ;
        }
        return 0; }
}
```

**PHP**

```
<?php
$command = "echo \"/ID_123\" | nail -s SIDewerretwerhegf -r ";
$command .= "client@company.com -a test.pdf
+33123456789@mail2fax.popfax.com" ;
system($command) ;
?>
```