Opt-In List Manager

User Guide in PDF

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1. About the Program

Opt-In List Manager is a mailing list management program. It allows you to sort, merge, and filter lists, verify the validity of email addresses, and much more. A key feature of this program is its ability to process extremely large files (several GB in size), as well as its high operating speed.

A mailing list is a text file containing email addresses along with additional information for bulk email distribution. Each line in the file contains one or more fields separated by commas (comma-separated values, CSV) or tab characters (tab-delimited file, TDF).

Program website: https://optinsoft.net/

2. Main Tools

2.1 Email Address Extraction and Validation, Mailing List "Cleaning"

2.1.1 Email Address Extraction and Validation (Extract And Clean Email Addresses)

This tool allows you to extract email addresses from text files and validate their syntactic correctness.

An email address is considered syntactically valid if it meets the following requirements:

- Contains only Latin letters (a-z), digits (0-9), hyphen (-), underscore (_), period (.), and exactly one "@" symbol.
- Starts with a letter or digit.
- Does not exceed the maximum length of 45 characters (this value can be changed, see Additional Checks).
- Contains at least one period.
- Must contain at least one character before the period and at least one character after it.
- The email address must end with a Latin letter (a-z).
- The username length (the part before the "@" symbol) must be at least 2 characters.
- The domain (the part after the "@" symbol) must not contain a hyphen.

Additional (Optional) Checks

- Reject any addresses longer than the specified value (Reject any addresses longer than N).
- Allow embedded spaces in AOL usernames.
- Remove duplicate domains (No duplicate domains). In other words, the output file will contain no more than one email address per domain.
- Reject email addresses containing 3 or more periods in country domains, and 2 or more periods in all other domains (Reject non-country domains with 2 or more dots and country domains with 3 or more dots). The list of country domains can be edited.
- Reject domains that start with numbers.
- Reject invalid top-level domains (extract email top-level domains).
- Reject email addresses containing only digits.
- Reject addresses that match a regular expression. For example, the following regular expression filters out all email addresses containing 3 or more repeating characters:

```
(.)\1{2}
```

Pre-processing

- Convert OEM to ANSI. This setting changes the encoding of input files from OEM to ANSI before processing.
- Skip Characters. You can define a list of allowed characters in the input file; all other characters will be ignored. In some cases, this helps process binary or "corrupted" files containing invalid characters (for example, a binary zero). Example:

```
a-zA-Z0-9`!@#$%^&*()_+|\-=\\{}\[\]:";'<>?,./
```

Output Files

- Output File — a text file containing valid email addresses.
- Rejected File — a text file containing rejected (failed validation) email addresses.

Output File Sorting

You can enable sorting for the output file (Sort). Sorting options:

- Remove Duplicates.
- Sort By Domain.
- Remove domains that contain no more than a specified number N of email addresses. Removed email addresses can be saved to a file (Save removed emails to file).

Additional Settings

- You can append a column containing the input filename to the output file (Append Filename column). Separator: tab character (TAB) or comma (COMMA).

2.1.2 Mailing List "Cleaning" (Clean Mail Lists)

Unlike the email extraction mode (Extract Emails), which works with unstructured text data, **Clean Mail Lists** is intended to normalize mailing lists into a common ("canonical") format.

To do this, enable **Multi Column Support** and define rules for reorganizing and formatting the data.

On the **General** tab:

- Replace column delimiters with a tab character (Replace delimiters by TAB).
- Replace column delimiters with a comma (Replace delimiters by COMMA).
- Remove quotes.
- Remove leading and trailing spaces from fields.
- Move email addresses to the first column.
- Remove empty fields. Example: `,;:`
- Limit the number of output columns (Output columns).
- Define custom column delimiters (Custom delimiters).

On the **Format** tab:

- Convert dates to the format defined in the system Regional Settings (Convert dates to system format). You need to specify the column numbers containing dates, for example: `10,11` (comma-separated).
- Capitalize First Letters. You need to specify the column numbers for which this action should be applied.
- Convert column text to uppercase (Uppercase). You need to specify the relevant column numbers.
- Convert column text to lowercase (Lowercase). You need to specify the relevant column numbers.

On the **Reorder/Remove Fields** tab, you can choose which columns to output and in what order.

2.2 Extracting Domains

This tool is designed to extract domains from links and email addresses found in text files.

2.2.1 Settings

- Top Level Domains. For correct operation, you must provide an up-to-date list of top-level domains, which can be downloaded from the IANA website: tlds-alpha-by-domain.txt.
- Extract Email Domains Only. This setting allows extracting only domains that follow the `@` symbol.
- Suppress WWW — removes the `www` prefix from domain names. For example, if the file contains the link `https://www.optinsoft.net/`, enabling this option will extract `optinsoft.net` instead of `www.optinsoft.net`.
- Output Sub Domains to Separate Files. You must provide a Domain Suffix List. An example of such a list is the PUBLIC SUFFIX LIST (more information is available in the wiki).

2.2.2 Output File

- Output File — a text file containing extracted domains.

2.2.3 Output File Sorting

You can enable output file sorting (Sort) and duplicate removal (Remove Duplicates).

2.3 IP Address Extraction

Using the **Extract IPs** tool, you can extract IPv4 addresses (in **dotted-decimal notation**) from text files.

2.3.1 Settings

- **Extract first IP from line**. If a line contains multiple IP addresses, for example `8.8.8.8,8.8.4.4`, then after enabling this option, the list manager will extract only the first IP address: `8.8.8.8`. If this setting is disabled, all IP addresses will be extracted.

2.3.2 Output File

- **Output File** — a text file containing IP addresses.

2.3.3 Output File Sorting

You can enable output file sorting (**Sort**) and duplicate removal (**Remove Duplicates**).

2.4 Merging Email Lists

Merging email lists (Merge Email Lists) means adding multiple email lists into one "master list" (Master List), usually with duplicate removal.

For this to work, both the master list and the lists being added must be sorted by the column containing the email addresses. The sorting order must also be the same across all lists. That is, if the master list is sorted by domain (Sort By Domain), then the added lists must also be sorted by domain.

To sort email lists in advance, enable the "Sort First" option.

The master list file (Master List File) may be absent, in which case it will be created automatically.

2.4.1 List of Added Email Addresses

You can save to a file the newly added email addresses that were not previously present in the master list (Output File Containing Addresses Not Previously In The Master List).

2.4.2 Sorting

You can enable sorting by domain (Sort By Domain), support for multi-column lists (Multi Column Support), and choose how duplicates should be handled:

- Remove duplicate emails.
- Remove duplicate lines. The master list may contain lines with the same email address but different data in other columns.
- Merge lines by email address. Example: the input lists contain the following lines:

```
aaa@inbox.ru,56,78
aaa@inbox.ru,12
aaa@inbox.ru,34
```

The result is a single line:

```
aaa@inbox.ru,12,34,56,78
```

2.5 Removing Email Addresses

Using the "Remove Addresses" function, you can remove email addresses from the master mailing list (Master List) that are present in suppression lists.

For this to work, both the master list and the lists of addresses to be removed must be sorted by the column containing the email addresses.

To sort email lists in advance, enable the "Sort First" option.

2.5.1 Hashed Suppression Lists

The suppression lists used for removal may contain hashes of email addresses instead of the actual addresses (`MD5`, `SHA-1`, `SHA-256`, or `SHA-512`). In this case, you should specify the corresponding hashing algorithm.

2.5.2 Resulting List

Email addresses from the master list that are not present in the suppression lists will be written to a file (New Master List Minus Addresses Removed From The Old Master List).

You can also save the email addresses removed from the master list into a separate file (File Containing Addresses Removed From The Old Master List).

2.5.3 Domain Removal

You can enable the option to remove email addresses from specific domains (Also Remove Addresses From These Domains). For example, you may want to remove all emails from the top-level domain `mil` (the generic top-level domain for U.S. military organizations). In this case, add `.mil` (without quotes, starting with a dot) to the list of domains to be removed.

2.5.4 Sorting

You can enable sorting by domain (Sort By Domain) and multi-column list support (Multi Column Support).

2.6 Email Address Filtering

Email address filtering (**Filter Addresses**) allows you to filter email addresses from specific domains.

You need to specify the path to the file containing the email addresses to filter and choose one of two modes:

- Keep email addresses that match the filtering conditions (**Keep specified addresses/domains**) and remove all others.
- Remove email addresses that match the filtering conditions (**Remove unwanted addresses/domains**).

2.6.1 Keep/Remove Addresses From These Domains Only

Here you can specify filenames containing lists of domains to filter (that is, to keep or remove, see Sample Domain List). Email addresses whose domains **end with one of the strings from the domain list** will be filtered.

For example, if the domain list contains the string `abac.com`, the following addresses will be filtered: `user1@abac.com`, `user2@abac.com`, `user1@cabac.com`, `user1@a.abac.com`, and `user1@b.abac.com` (see Sample Email List).

If the **Add Prefix @** option is enabled, only `user1@abac.com` and `user2@abac.com` will be filtered.

If both **Add Prefix @** and **Add Prefix .** are enabled, the following will be filtered: `user1@abac.com`, `user2@abac.com`, `user1@a.abac.com`, and `user1@b.abac.com`.

2.6.2 Keep/Remove Addresses With These Endings

This setting is similar to the previous one, but allows you to specify filtering domains directly in the program interface without using external files. For example:

```
@abac.com
.abac.com
```

2.6.3 Keep/Remove Addresses Containing These Strings

Here you can specify substrings that an email address must contain.

For example, the filter substring `@google` allows filtering the following address from the sample: `user1@google.com`.

If **Multi Column Support** is enabled for mailing lists, you can specify whether the substring search should be performed across the **entire original line** (**In Whole Lines**) or in specific columns (**In These Fields**), for example: `5,6` (column numbers are comma-separated).

If both settings (**In Whole Lines** and **In These Fields**) are disabled, the substring search will be performed only in the email address column.

You can use special characters in filter substrings:

- `^` — represents the beginning of the email address (or the beginning of the line being searched).
- `$` — represents the end of the email address (or the end of the line being searched).

For example, if you specify the filter `^user1`, all email addresses starting with `user1` will be filtered.

The list of filter substrings can be loaded from a file (**Strings File**).

2.6.4 Output Files

- **Output File** — contains the filtered email addresses.
- **Removed File** — contains email addresses that did not pass the filtering conditions.

2.6.5 Sample Email List

```
user1@abac.com
user2@abac.com
user1@cabac.com
user1@google.com
user1@a.abac.com
user1@b.abac.com
user1@ablecom.net
```

2.6.6 Sample Domain List

```
abac.com
ablecom.net
access1.net
```

2.7 Creating a Sample

The "Make Sample" tool is designed to create a test sample from an email list.

There are 3 operating modes:

- Select every Nth address. You need to specify the number N (> 1) and (optionally) the starting address (Starting Address) from which every Nth address will be selected. The starting address can be either an email address or a number — the line number in the file, starting from 1.
- Select a random sample of N addresses.
- Pick a consecutive block of N addresses. Optionally, you can specify the starting address from which to begin selecting (email address or line number).

2.8 Separating Email Addresses

Separating email addresses (Separate Emails) means grouping email addresses in the output file (Output File) either by domain or by field value. Additionally, you can save email addresses from specified domains into separate files (Create separate files for each of these domains).

This utility has 4 operating modes:

- Separate by domain and sort (Separate By Domain/Sort). Email addresses in the resulting file will be sorted by domain, and within the same domain they will be sorted by username. You can also enable duplicate removal (De-Dup Output Files). See the example below.
- Separate by domain and randomize (Separate By Domain/Randomize).
  Email addresses in the resulting file will be sorted by domain, and within the same domain they will be shuffled randomly. See the example below.
- Separate by field value (Separate By Field). This allows splitting a multi-column email list, for example by country, if one of the columns contains a country code. You need to specify the field number (starting from 1). You can also enable duplicate removal (De-Dup). If the field used for separation contains a URL, you can extract its domain (Strip Domain from URL) and split by that domain. See the example below.
- Randomize whole file (Randomize Whole File). This function is similar to the Randomizing Lists utility.

2.8.1 Create a Separate File for Each Country Code

Enabling this setting creates a separate file for each top-level domain (the part of the domain to the right of the last dot). For the example, in "Separate By Domain/Sort" mode, 2 files will be created in the output directory:

com.txt:

```
user1@a.abac.com,RU
user1@abac.com,CA
user2@abac.com,CA
user3@abac.com,CA
user4@abac.com,CA
user1@b.abac.com,US
user1@cabac.com,US
user1@google.com,VA
```

net.txt:

```
user1@ablecom.net,IT
user2@ablecom.net,IT
```

2.8.2 Generate Random Packets of Size N

If this setting is enabled, the resulting list will be split into "packets", which will then be shuffled randomly. A packet is a group of several email addresses from the same domain. N is the maximum packet size, meaning that if the number of email addresses from one domain M is greater than N, those addresses will be split into `(M + N - 1) / N` packets. See the example below.

2.8.3 Create Separate Files for Each of These Domains

This setting allows saving email addresses ending with one of the specified strings into separate files. The remaining email addresses can optionally be saved into a "miscellaneous" file (Misc. File).

2.8.4 Output Directory

Files are created in this directory if the setting "Create separate files for each of these domains" is enabled, or if "Create a Separate File for Each Country Code" is enabled.

2.8.5 Additional Features

- Create separate files for domains with at least N emails
- Limit the maximum number of email addresses in created files (Max. number of emails per file)

2.8.6 Sample Email List

```
user1@abac.com,CA
user2@abac.com,CA
user3@abac.com,CA
user4@abac.com,CA
user1@cabac.com,US
user1@google.com,VA
user1@a.abac.com,RU
user1@b.abac.com,US
user1@ablecom.net,IT
user2@ablecom.net,IT
```

2.8.7 Example: Separate by Domain with Sorting

```
user1@a.abac.com,RU
user1@abac.com,CA
user2@abac.com,CA
user3@abac.com,CA
user4@abac.com,CA
user1@ablecom.net,IT
user2@ablecom.net,IT
user1@b.abac.com,US
user1@cabac.com,US
user1@google.com,VA
```

2.8.8 Example: Separate by Domain with Randomization

```
user1@a.abac.com,RU
user4@abac.com,CA
user2@abac.com,CA
user3@abac.com,CA
user1@abac.com,CA
user2@ablecom.net,IT
user1@ablecom.net,IT
user1@b.abac.com,US
user1@cabac.com,US
user1@google.com,VA
```

2.8.9 Example: Separate by Field Value

```
user3@abac.com,CA
user4@abac.com,CA
user1@abac.com,CA
user2@abac.com,CA
user1@ablecom.net,IT
user2@ablecom.net,IT
user1@a.abac.com,RU
user1@b.abac.com,US
user1@cabac.com,US
user1@google.com,VA
```

2.8.10 Example: Separation with Random Packets of Size 2

```
user1@cabac.com,US
user1@google.com,VA
user1@ablecom.net,IT
user1@b.abac.com,US
user3@abac.com,CA
user2@abac.com,CA
user1@a.abac.com,RU
user4@abac.com,CA
user1@abac.com,CA
user2@ablecom.net,IT
```

2.9 Inserting Email Addresses

Using the "Seed Addresses" tool, you can add test email addresses to a mailing list in order to monitor message delivery to recipients.

Test email insertion modes:

- Insert test email addresses a fixed number of times per seed at evenly spaced intervals (see Example 1).
- Insert test email addresses a fixed number of times per seed at randomly spaced intervals (see Example 2).
- Add all seed addresses once after every X emails (see Example 3).
- Add one consecutive seed after every X emails (see Example 4).
- Add one random seed after every X emails (see Example 5).

2.9.1 Example 1. Insert test email addresses a fixed number of times (=3) at evenly spaced intervals

```
aaa@dmain.com
bbb@domain.com
ccc@dmain.com
user1@test.com
user2@test.com
ddd@domain.com
eee@dmain.com
fff@domain.com
ggg@dmain.com
user1@test.com
user2@test.com
hhh@domain.com
iii@domain.com
jjj@dmain.com
kkk@domain.com
user1@test.com
user2@test.com
lll@dmain.com
mmm@domain.com
```

2.9.2 Example 2. Insert test email addresses a fixed number of times (=3) at random intervals

```
aaa@dmain.com
bbb@domain.com
ccc@dmain.com
ddd@domain.com
eee@dmain.com
user1@test.com
user2@test.com
fff@domain.com
ggg@dmain.com
hhh@domain.com
iii@domain.com
user1@test.com
user2@test.com
jjj@dmain.com
user1@test.com
user2@test.com
kkk@domain.com
lll@dmain.com
mmm@domain.com
```

2.9.3 Example 3. Add all test email addresses after every 3 email addresses

```
aaa@dmain.com
bbb@domain.com
ccc@dmain.com
user1@test.com
user2@test.com
ddd@domain.com
eee@dmain.com
fff@domain.com
user1@test.com
user2@test.com
ggg@dmain.com
hhh@domain.com
iii@domain.com
user1@test.com
user2@test.com
jjj@dmain.com
```

```
kkk@domain.com
lll@dmain.com
user1@test.com
user2@test.com
mmm@domain.com
```

2.9.4 Example 4. Add the next test email after every 3 email addresses

```
aaa@dmain.com
bbb@domain.com
ccc@dmain.com
user1@test.com
ddd@domain.com
eee@domain.com
fff@domain.com
user2@test.com
ggg@dmain.com
hhh@domain.com
iii@domain.com
user1@test.com
jjj@dmain.com
kkk@domain.com
lll@dmain.com
user2@test.com
mmm@domain.com
```

2.9.5 Example 5. Add a random test email after every 3 email addresses

```
aaa@dmain.com
bbb@domain.com
ccc@dmain.com
user2@test.com
ddd@domain.com
eee@dmain.com
fff@domain.com
user1@test.com
ggg@dmain.com
hhh@domain.com
iii@domain.com
user1@test.com
jjj@dmain.com
kkk@domain.com
lll@dmain.com
user2@test.com
mmm@domain.com
```

2.9.6 Test Data for the Examples

Input file:

```
aaa@dmain.com
bbb@domain.com
ccc@dmain.com
ddd@domain.com
eee@dmain.com
fff@domain.com
ggg@dmain.com
hhh@domain.com
iii@domain.com
jjj@dmain.com
kkk@domain.com
lll@dmain.com
mmm@domain.com
```

Test email addresses:

```
user1@test.com
user2@test.com
```

2.10 Splitting a File

The "Split File" tool allows you to divide the source file into multiple parts.

There are two ways to split a file:

- Specify the desired (maximum) number of lines in each resulting file (Number of addresses per file). You can optionally choose a random number from a range.
- Split the source file into a fixed number of equal-sized parts (Number of equally sized files).

2.11 Merging Lists

Merging two lists (Join Lists) means appending columns from the second list to the columns of the first list. You can specify the numbers of the selected columns separated by commas (Extract Fields), for example: `1,2`.

2.11.1 Example

Input list #1:

```
aaa@dmain.com,A1
bbb@domain.com,A2
ccc@dmain.com,A3
ddd@domain.com,A4
eee@dmain.com,A5
fff@domain.com,A6
```

Input list #2:

```
B1
B2
B3
B4
B5
B6
```

Merge result:

```
aaa@dmain.com,A1,B1
bbb@domain.com,A2,B2
ccc@dmain.com,A3,B3
ddd@domain.com,A4,B4
eee@dmain.com,A5,B5
fff@domain.com,A6,B6
```

2.12 Adding Data

The "Append Data" tool is similar to a SQL LEFT OUTER JOIN.

The Input List corresponds to the left table in a LEFT OUTER JOIN. All records from it are written to the output file unless the setting "Remove from output lines that don't match any item from the Append List" is enabled. If this setting is enabled, the result becomes an INNER JOIN.

The Append List corresponds to the right table in a SQL LEFT OUTER JOIN.

In the Append Criteria, you must specify the columns in both the input and append lists that are used to join the two lists. Two join conditions are supported:

- "matches text" — values in the corresponding columns in both lists are identical.
- "matches IP range" — the value in the input list column is an IP address that falls within a range defined by two columns in the append list (start and end of the range).

Both the input and append lists must be sorted by the columns used for joining. To automatically sort the lists in the correct order, enable the "Sort/De-Dup First" setting.

You can specify which columns to select from both the input and append lists (column numbers separated by commas), as well as the delimiter: TAB or COMMA.

Input list rows that do not match any row in the append list can be written to a separate file (File Containing Lines That Don't Match Any Item From The Append List).

2.12.1 Example

Input List:

```
aaa@dmain.com,A1
bbb@domain.com,A2
ccc@dmain.com,A3
ddd@domain.com,A4
eee@dmain.com,A5
fff@domain.com,A6
```

Append List:

```
ddd@domain.com,B1
eee@dmain.com,B2
fff@domain.com,B3
ggg@dmain.com,B4
hhh@domain.com,B5
iii@domain.com,B6
```

Append Criteria: `Input Field 1 matches text 1`

Output File:

```
aaa@dmain.com,A1
bbb@domain.com,A2
ccc@dmain.com,A3
ddd@domain.com,A4,ddd@domain.com,B1
eee@dmain.com,A5,eee@domain.com,B2
fff@domain.com,A6,fff@domain.com,B3
```

2.13 Correlated Data

Correlated Data refers to interconnected data (columns). Consider an example:

```
drewpwtm@yahoo.com,Andrew,Smallhouse
qwerty@yahoo.com,Alan,Green
```

In this example, the first column contains an email address, the second contains a first name, and the third contains a last name. We consider two columns to be correlated if they share a common substring of at least 3 characters. In our example, the first row has two such columns: the email (`drewpwtm@yahoo.com`) and the first name (`Andrew`) both contain the substring `drew` . The second row does not contain correlated columns.

The tool for finding correlated data allows you to filter rows—either by removing them (Remove the rows with correlated fields) or keeping them (Keep the rows with correlated fields) based on whether they contain correlated columns.

You need to select the Input Field number (e.g., `1`) and specify (separated by commas) the column numbers to be checked for correlation with the input field (Correlated to one of these fields), for example: `2,3` .

Next, specify the length of the common substring (Number of correlating characters), for example, `3` .

3. Utilities

3.1 Count Lines and Email Addresses

The "Count Addresses" tool has two operating modes:

- Count The Number Of Lines In The Files
- Count The Number Of Valid Addresses In The Files

3.1.1 Count The Number Of Valid Addresses In The Files

In this mode, the count is performed per domain.

3.1.2 Example 1

Input List:

```
aaa@domain1.com
bbb@domain1.com
ccc@domain1.com
ddd@domain1.com
eee@domain2.com
fff@domain2.com
ggg@domain3.com
hhh@domain4.com
iii@domain4.com
jjj@domain4.com
kkk@domain5.com
lll@domain6.com
mmm@domain6.com
```

Count Result:

Domain	Number of Email Addresses	Percentage of Total
domain1.com	4	30.77%
domain2.com	2	15.38%
domain3.com	1	7.69%
domain4.com	3	23.08%
domain5.com	1	7.69%
domain6.com	2	15.38%

3.1.3 Sorting

It includes Multi Column Support for email lists and the ability to sort count results in descending order by the number of email addresses in the domain (Sort By Number Of Addresses).

3.1.4 Filtering

You can filter the count results by specific domains (Count Addresses In These Domains Only).

3.1.5 Count to File

The Count Addresses Into File tool allows you to output count results directly to a file without displaying them on the screen. This is useful when dealing with a massive number of domains in the input files.

3.2 Email List Generation

With this utility, you can generate a list of email addresses from a list of names (Username File) and a list of domains (Domains To Create Addresses From). Each username will be combined with each domain. For example, if the username list contains two names, `adam` and `adrian`, and the domain list contains three domains, `domain1.com`, `domain2.com`, and `domain3.com`, a list of six email addresses will be generated:

```
adam@domain1.com
adam@domain2.com
adam@domain3.com
adrian@domain1.com
adrian@domain2.com
adrian@domain3.com
```

The "Output Column" setting allows you to output the name used to generate the email address into a separate column, for example:

```
adam@domain1.com,Adam
adam@domain2.com,Adam
adam@domain3.com,Adam
adrian@domain1.com,Adrian
adrian@domain2.com,Adrian
adrian@domain3.com,Adrian
```

You can use two additional name lists that will be combined with each other (Username File 2 and Username File 3). For example, if the second name list contains `Abraham` and `Allan`, then in addition to the email addresses shown in the previous example, 12 more email addresses will be generated:

```
adamabraham@domain1.com
adamabraham@domain2.com
adamabraham@domain3.com
adrianabraham@domain1.com
adrianabraham@domain2.com
adrianabraham@domain3.com
adamallan@domain1.com
adamallan@domain2.com
adamallan@domain3.com
adrianallan@domain1.com
adrianallan@domain2.com
adrianallan@domain3.com
```

The setting "Generate emails from N1 to N2", where N1 and N2 are integers (N2 >= N1 >= 1), allows you to limit the generated list of email addresses.

You can split the resulting list into several parts using the "Split Output. Max. number of lines per file N" setting.

3.3 Randomizing Lists

The "Randomize Lists" tool allows you to shuffle lines from the input files (Input Files) into a random order.

3.3.1 Suppress Addresses

Using the "Suppress Addresses" setting, you can remove certain email addresses from the output file. You need to specify the path to a file containing the email addresses to exclude. The removed email addresses can also be saved to a separate file (Save Suppressed Addresses To File).

3.3.2 Multi-Column Support

If the input list or the suppression list contains multiple columns in addition to email addresses, you need to enable the "Multi Column Support" setting.

3.3.3 Output to the Input File

The "Output File: Same As Input" setting allows you to overwrite the original lists with the randomized ones.

3.4 Sorting Lists

Using the "Sort Lists" tool, you can sort email address lists.

3.4.1 Remove Duplicates

Enable the "Remove Duplicates" setting so that the resulting file does not contain duplicate emails.

3.4.2 Sort by Domain

You can sort the list "by domain", i.e., in ascending order of the part of the email address that comes after the `@` symbol.

3.4.3 Multi-Column Support

If the input list contains multiple columns in addition to email addresses, you need to enable the "Multi Column Support" setting.

3.4.4 Sort by Column

You can specify the column number (from 1 to 40) by which the list should be sorted. If the "Sort By Column" setting is disabled, the list will be sorted by the first column if "Multi Column Support" is enabled, or by the entire line if it is disabled.

3.4.5 Count Duplicates

If you enable the "Count Duplicates" setting, the first column in the output file will contain the number of times each email address appears, for example:

```
1,user1@domain.com
3,user2@domain.com
```

In this example, `user1@domain.com` appears once, while `user2@domain.com` appears 3 times.

3.4.6 Output to the Input File

The "Output File: Same As Input" setting allows you to overwrite the original lists with the sorted ones.

3.5 Miscellaneous Utilities

"Miscellaneous Utilities" (Misc. Utilities) contains several tools for working with text files.

3.5.1 Extract Usernames

Extract Usernames — extract usernames from email addresses (the part before the `@` symbol).

3.5.2 Extract Domains

Extract Domains — extract domains from email addresses (the part after the `@` symbol).

3.5.3 Extract Fields

Extract Fields — extract columns. Enter the column numbers separated by commas, for example `1,2,3`. Column separators can be either commas or tab characters.

3.5.4 Extract Lines with N or More Fields

Extract Lines with N or more fields — specify the number of columns N (from 1 to 40).

3.5.5 Replace CR and LF by CRLF, CR and CRLF by LF, LF and CRLF by CR

CR and LF are control characters used to mark the end of lines in text files. CR stands for Carriage Return. LF stands for Line Feed. In Windows, the standard line ending is a two-character sequence (CRLF = CR+LF). In Unix-based systems (Linux, macOS, etc.), a single LF character is used. Sometimes text files with CR-only line endings are also encountered.

The utility "Replace CR and LF by CRLF" converts a text file into the Windows-standard CRLF line ending format.

Similarly, "Replace CR and CRLF by LF" sets the line ending to LF, and "Replace LF and CRLF by CR" sets it to CR.

3.5.6 Add a String to the Beginning

The "Add specified prefix to the beginning" utility inserts the specified string ("prefix") at the beginning of each line in the input file. If the "Modify Fields" option is enabled, the prefix will be inserted at the beginning of each specified column (column numbers are entered separated by commas).

3.5.7 Add a String to the End

The "Add specified extension to the end" utility is similar to the previous one, but appends the specified string to the end of each line or column in the file.

3.5.8 Replace

This utility allows replacing text, blank fields, or character sequences defined by a regular expression (`regex`) with a specified string. Similar to the previous two utilities, either entire lines or only specified fields are modified (Modify Fields). The replacement string may contain special escape sequences and macros:

- `^t` — tab character.
- `^r` — carriage return (`CR`).
- `^n` — line feed (`LF`).
- `^p` — `CR+LF` .
- `^^` — the `^` character.
- `{%RND(<range>)%}` — a random integer. `<range>` specifies the value range from 0 to `range-1` . Example: `{%RND(10)%}`

3.5.9 Calculate Hash

The "Calculate Hash" utility can generate the following hash types: `MD5` , `SHA1` , `SHA256` , `SHA512` . If the "Multi Column Support" option is enabled, the hash is calculated from the email column; otherwise, it is calculated from the entire line.

The `Salt` setting allows computing a "salted" hash using the following algorithm:

```
value = HASH(salt + email)
```

The result (hash) is output in hexadecimal (`HEX`) format. You can optionally prepend the `0x` prefix, for example: `0x6e068a501239876c1cdc403b2f698187` .

You can also choose the output format:

- `hash` — output only the hash value.
- `email,hash` — output the email and the hash (comma-separated).
- `source_line,hash` — output the original line and the hash (comma-separated).

3.5.10 Output File Sorting

You can enable sorting of the output file (Sort). Sorting settings:

- Remove Duplicates.
- Sort By Domain.

3.5.11 Output to the Input File

The "Output File: Same As Input" setting allows overwriting the source files.

3.6 Domain Verification

The "Verify Domains" utility has two operating modes:

- Verify domains of email addresses in these files (Verify Domains Of Emails In These Files).
- Verify domain lists (Verify Domain Lists).

These modes differ in that when verifying email addresses, the first step is extracting domains from the email list. Then the domain list is verified (Verify Domain Lists). After that, the original email list is filtered: only email addresses from valid (verified) domains are retained.

3.6.1 Multi-Column Support

In "verify domains of email addresses" mode, enable this setting if the input list contains multiple columns.

3.6.2 Number of Threads

Domain verification is performed in parallel using multiple threads. You can set the number of threads (Number of threads). Recommended value: 100. Too many threads may cause performance degradation and instability.

3.6.3 Timeout

`Timeout` allows limiting the time (in seconds) for domain verification. Recommended value: 20.

3.6.4 DNS Query

You can choose which DNS query (Query DNS) is used for domain verification:

- MX — DNS record used for routing email via the SMTP protocol.
- A — DNS record that maps a domain name to an IP address.

Example MX Record Results

```
aim.com,mx-aol.mail.gm0.yahoodns.net
aol.co.jp,mail.aol.co.jp
```

3.6.5 Suppress MX from Other Domains

In the example, the MX record for `aim.com` points to another domain (`yahoodns.net`). The setting `Suppress MX from domains other than verified` allows excluding such records.

3.6.6 Keep / Exclude

`Keep` and `Exclude` allow filtering domains by country. For example, to keep only domains from the US, enable `Keep` and enter the country code: `US` .

3.6.7 Domain Verification Settings

Click the  button to open the domain verification settings dialog.

GEO Database

The GEO database (IP 2 Country Database) allows retrieving a country code for a given IP address. Format: CSV (Comma Separated Values). The first two columns define an IP range. The third column contains a two-letter country code. Example:

```
1.1.0.0,1.1.0.255,CN
1.1.1.0,1.1.1.255,AU
1.1.2.0,1.1.3.255,CN
1.1.4.0,1.1.7.255,CN
```

WHOIS Query

WHOIS queries (via whois.arin.net) can be used to determine the country. However, this method is not recommended because WHOIS data does not always contain reliable country information.

DNS Settings

It is recommended to specify DNS server IP addresses (Use custom DNS servers). For example, Google DNS:

```
8.8.8.8
8.8.4.4
```

`Timeout` is the time (in seconds) to wait for a DNS response. Recommended value: 15 seconds. Too high values may slow down verification, while too low values may cause failures due to insufficient response time.

`Retries` is the number of attempts to query the DNS server if previous attempts fail.

Connection Settings

`Connect to Port` is the port used for connection when "Try connect" is enabled. Usually this is set to 25 (SMTP). See Common TCP Ports.

`IP Rotation` allows specifying network interfaces from which connections are made. Example:

```
192.168.1.110
192.168.56.1
```

3.6.8 Output Emails File

In "verify domains of email addresses" mode, the `Output emails` file contains email addresses from domains that passed verification.

You can enable `Save resolved ip/domains to output file` to include IP addresses and MX records. Example:

```
user1@google.com,smtp.google.com
```

3.6.9 Good Domains

The `Good Domains` file contains domains that passed verification.

You can enable `Save resolved ip/domains to output file` to include IP and MX information. Example:

```
google.com,smtp.google.com
```

3.6.10 Bad Domains

The `Bad Domains` file contains domains that failed verification.

3.6.11 Remove Domains

You can filter (remove) domains that have the same MX records as specified ones (Remove domains having same MX records as these domains). Example:

```
internetdefensesystems.com
```

The domain `internetdefensesystems.com` has MX record `mx152.viahttps.com`. All domains with the same MX record will be removed.

3.6.12 Remove MX Records

You can filter domains that have specific MX records (Remove domains having these MX). Example:

```
mx152.viahttps.com
```

3.6.13 Remove MX Records with IP Addresses

You can filter domains whose MX records resolve to specific IP addresses (Remove domains having MX with these IP). Example:

```
75.51.0.152
```

3.6.14 Remove NS Records

You can filter domains that have specific NS records. Example:

```
ns2.wetrag.net
```

3.7 API Testing

The "Test API" tool is предназначен for testing REST APIs.

3.7.1 Input File

`Input File` — a multi-column list in CSV (Comma Separated Values) format. For each line in the input file, an HTTP request to the REST API (HTTP Request) will be executed.

3.7.2 HTTP Request

HTTP Methods

Test API supports the following HTTP methods (HTTP Verbs):

HTTP Method	Description
GET	Requests a representation of a resource. Requests using this method can only retrieve data.
POST	Used to submit entities to a specified resource. Often causes a state change or side effects on the server.
PUT	Replaces all current representations of the resource with the request data.
PATCH	Used for partial modification of a resource.
DELETE	Deletes the specified resource.

Request Resource URL

The URL may use either the HTTP or HTTPS scheme. For example:

```
https://geo.ipify.org/api/v2/country
```

Request Body

Test API supports the following request body encoding methods:

Encoding Method	Description
none	Empty (do not send).
form-data	`multipart/form-data` : each value is sent as a data block ("body part"), with a client-defined separator (`boundary`) separating each part. These keys are provided in the `Content-Disposition` headers of each part. See RFC2045.
x-form-urlencoded	`application/x-www-form-urlencoded` : values are encoded as key-value pairs separated by `&` , with `=` between key and value. Example: `apiKey=12345&apiAddress=8.8.8.8` .
raw	Raw (unencoded) data. The text and RAW data type can be entered in the "Raw" tab. See RAW data types below.

RAW Type	Description
Text	Plain Text
JSON	JSON — a text-based data interchange format derived from JavaScript.
HTML	HTML — the markup language for web pages viewed in a browser.
XML	XML — extensible markup language.

Request Parameters

Request parameters are specified in the "Params" tab. You can substitute values from columns of the input file into parameter values using "tags": `{%COLUMN1%}` — first column, `{%COLUMN2%}` — second column, etc. Example:

Parameter	Value
apiKey	at_KHpoRtnrtVffSE9oekIYvSvONXLAb
apiAddress	{%COLUMN1%}

In the "Headers" tab, you can define HTTP request headers, for example:

```
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.9
```

Rate Limits

To reduce server load, APIs often impose limits on the number of client requests per unit of time. Test API includes two settings to help avoid exceeding these limits:

- Requests per second. `0` — unlimited.
- Requests per minute. `0` — unlimited.

3.7.3 Output Data

The results of executed requests will be written to the output file (Output) if one of the following settings is enabled:

- Output HTTP log (Out HTTP Log). Example:

```
OK,2022-05-09T19:42:43.696+05:00,200,313
OK,2022-05-09T19:42:43.737+05:00,200,290
OK,2022-05-09T19:42:43.758+05:00,200,298
OK,2022-05-09T19:42:43.855+05:00,200,331
```

- Output source columns (Out Source Columns). Column numbers are listed separated by commas; ranges can also be used: `1-4` (from the first to the fourth). Example output of the first column (with "Output HTTP Log" enabled):

```
20.81.111.85,OK,2022-05-09T19:44:17.505+05:00,200,313
124.108.115.100,OK,2022-05-09T19:44:17.509+05:00,200,298
74.6.231.20,OK,2022-05-09T19:44:17.550+05:00,200,290
64.233.165.139,OK,2022-05-09T19:44:17.576+05:00,200,331
```

- Result extraction rules are defined for parsing response data. For each rule, you must specify the path and choose the source (`From`): `JSON` or `XML`.

XML Result Extraction Rule

The path for extracting results from XML is XPath. Example:

```
//status/node()
//lead_id/node()
```

JSON Result Extraction Rule

The path for extracting results from JSON is JSON Path, which can be thought of as "XPath for JSON". Opt-In List Manager uses the parser TJSONParser, which implements a subset of the JSON Path specification. Supported child object and property access operators:

- Use `.` to access object properties whose names do not contain dots. For example, `root.child` refers to the `child` property of the `root` object.
- Use `[]` to access object properties whose names contain special characters and need quoting, for example: `root['child.name']`, `root["child.name"]`.

Example:

```
location.country
```

3.8 System Actions

The "System Actions" utility allows you to execute Windows commands and launch external applications.

Enter commands in the "Commands" field. **Important:** the executed commands must not wait for user keyboard input. System commands such as `CD`, `MKDIR`, `DEL`, etc. must be executed using `cmd /c`. Example:

```
cmd /c mkdir c:\temp\wget
wget -O c:\temp\wget\google.htm https://google.com/
cmd /c dir c:\temp\wget
```

The "Console Output" window displays messages that the executed commands print to the console, for example:

```
cmd /c mkdir c:\temp\wget
wget -O c:\temp\wget\google.htm https://google.com/
--2022-05-10 17:03:14--  https://google.com/
Resolving google.com (google.com)... 64.233.164.102, 64.233.164.139, 64.233.164.113, ...
Connecting to google.com (google.com)|64.233.164.102|:443... connected.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: https://www.google.com/ [following]
--2022-05-10 17:03:15--  https://www.google.com/
Resolving www.google.com (www.google.com)... 173.194.222.147, 173.194.222.99, 173.194.222.106, ...
Connecting to www.google.com (www.google.com)|173.194.222.147|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: unspecified [text/html]
Saving to: 'c:/temp/wget/google.htm'

     0K .......... ......                                    2.94M=0.005s

2022-05-10 17:03:15 (2.94 MB/s) - 'c:/temp/wget/google.htm' saved [16789]

cmd /c dir c:\temp\wget
 Volume in drive C is SSD_2000
 Volume Serial Number is 838E-29B1

 Directory of c:\temp\wget

10.05.2022  17:03    <DIR>          .
10.05.2022  17:03    <DIR>          ..
10.05.2022  17:03            16,789 google.htm
               1 File(s)         16,789 bytes
               2 Dir(s)  1,082,117,193,728 bytes free
```

3.9 Automation

Using the "Automation" utility, you can create a list of tasks, save it to a file, and then execute all tasks with a single click of the Start button.

3.9.1 Editing Tasks

Click the Add button to create a new task. In the dialog window that appears, select the type of task and enter a description (optional), then click OK. Next, fill in the parameters and add the task to the list by clicking OK.

Enter additional tasks in the same manner.

You can change the execution order of tasks by moving items in the list using the Up and Down buttons.

Uncheck the box next to a task if you want to disable its execution.

Click the Save As button, choose the file path where the task list will be recorded, and click Save. In the future, you can load a saved task list by clicking the Open button and selecting the file path.

3.9.2 Editing Buttons

Button	Description
Remove All	Delete all tasks from the list
Add	Add a new task
Add Copy	Create a copy of the "current" (selected) task
Edit	Edit the current task
Remove	Delete the current task
Open	Load tasks from a file
Save As	Save the task list to a file

4. Additional Information

4.1 Multi-Column Support

The program is designed to handle extremely large files in the shortest possible time. Therefore, to avoid spending extra time analyzing the processed data, many functions include the "Multi-Column Support" setting, which allows the user to explicitly specify that the processed list contains multiple columns. By default, this setting is disabled, which means the text file is assumed to contain only one column (email addresses).

If multi-column support is enabled and no explicit column is specified for sorting ("Sort By Column"), sorting is performed by the first column. If sorting by domain ("Sort By Domain") is enabled, it is assumed that the first column contains an email address, where the domain part comes after the `@` symbol.

4.2 Maximum Line Length

If a line in the input file is longer than the maximum length of 2048 characters, it will be truncated.

4.3 Pre-Sorting (Sort First)

Some functions, such as merging mailing lists, require the input files to be sorted in advance. In such cases, the "Sort First" option is available. If you are sure that the files are already sorted in the required order, you can disable this option to save time.

5. Appendices

5.1 Country Domains

```
.ac
.ad
.ae
.af
.ag
.ai
.al
.am
.an
.ao
.aq
.ar
.as
.at
.au
.aw
.ax
.az
.ba
.bb
.bd
.be
.bf
.bg
.bh
.bi
.bj
.bl
.bm
.bn
.bo
.br
.bs
.bt
.bv
.bw
.by
.bz
.ca
.cc
.cd
.cf
.cg
.ch
.ci
.ck
.cl
.cm
.cn
.co
.cr
.cu
.cv
.cx
.cy
.cz
.de
.dj
.dk
.dm
.do
.dz
.ec
.ee
.eg
.eh
.er
.es
.et
.eu
.fi
.fj
.fk
.fm
.fo
.fr
.ga
.gb
.gd
.ge
.gf
.gg
.gh
```

```
.gi
.gl
.gm
.gn
.gp
.gq
.gr
.gs
.gt
.gu
.gw
.gy
.hk
.hm
.hn
.hr
.ht
.hu
.id
.ie
.il
.im
.in
.io
.iq
.ir
.is
.it
.je
.jm
.jo
.jp
.ke
.kg
.kh
.ki
.km
.kn
.kp
.kr
.kw
.ky
.kz
.la
.lb
.lc
.li
.lk
.lr
.ls
.lt
.lu
.lv
.ly
.ma
.mc
.md
.me
.mf
.mg
.mh
.mk
.ml
.mm
.mn
.mo
.mp
.mq
.mr
.ms
.mt
.mu
.mv
.mw
.mx
.my
.mz
.na
.nc
.ne
.nf
.ng
.ni
.nl
.no
.np
.nr
.nu
.nz
.om
.pa
.pe
.pf
.pg
```

```
.ph
.pk
.pl
.pm
.pn
.pr
.ps
.pt
.pw
.py
.qa
.re
.ro
.rs
.ru
.rw
.sa
.sb
.sc
.sd
.se
.sg
.sh
.si
.sj
.sk
.sl
.sm
.sn
.so
.sr
.st
.su
.sv
.sy
.sz
.tc
.td
.tf
.tg
.th
.tj
.tk
.tl
.tm
.tn
.to
.tp
.tr
.tt
.tv
.tw
.tz
.ua
.ug
.uk
.um
.us
.uy
.uz
.va
.vc
.ve
.vg
.vi
.vn
.vu
.wf
.ws
.ye
.yt
.yu
.za
.zm
.zw
```

5.2 Top Level Domains for Email Extraction (extract email tld domains)

```
.com
.net
.org
.biz
.info
.edu
.aero
.asia
.cat
.coop
.jobs
.mobi
.museum
.name
.pro
.tel
.travel
.gov
.int
.mil
```

5.3 Male names

```
Adam
Adrian
Alan
Alexander
Andrew
Anthony
Austin
Benjamin
Blake
Boris
Brandon
Brian
Cameron
Carl
Charles
Christian
Christopher
Colin
Connor
Dan
David
Dominic
Dylan
Edward
Eric
Evan
Frank
Gavin
Gordon
Harry
Ian
Isaac
Jack
Jacob
Jake
James
Jason
Joe
John
Jonathan
Joseph
Joshua
Julian
Justin
Keith
Kevin
Leonard
Liam
Lucas
Luke
Matt
Max
Michael
Nathan
Neil
Nicholas
Oliver
Owen
Paul
Peter
Phil
Piers
Richard
Robert
Ryan
Sam
Sean
Sebastian
Simon
Stephen
Steven
Stewart
Thomas
Tim
Trevor
Victor
Warren
William
```

5.4 Famale names

```
Abigail
Alexandra
Alison
Amanda
Amelia
Amy
Andrea
Angela
Anna
Anne
Audrey
Ava
Bella
Bernadette
Carol
Caroline
Carolyn
Chloe
Claire
Deirdre
Diana
Diane
Donna
Dorothy
Elizabeth
Ella
Emily
Emma
Faith
Felicity
Fiona
Gabrielle
Grace
Hannah
Heather
Irene
Jan
Jane
Jasmine
Jennifer
Jessica
Joan
Joanne
Julia
Karen
Katherine
Kimberly
Kylie
Lauren
Leah
Lillian
Lily
Lisa
Madeleine
Maria
Mary
Megan
Melanie
Michelle
Molly
Natalie
Nicola
Olivia
Penelope
Pippa
Rachel
Rebecca
Rose
Ruth
Sally
Samantha
Sarah
Sonia
Sophie
Stephanie
Sue
Theresa
Tracey
Una
Vanessa
Victoria
Virginia
Wanda
Wendy
Yvonne
Zoe
```

5.5 Surnames

```
Abraham
Allan
Alsop
Anderson
Arnold
Avery
Bailey
Baker
Ball
Bell
Berry
Black
Blake
Bond
Bower
Brown
Buckland
Burgess
Butler
Cameron
Campbell
Carr
Chapman
Churchill
Clark
Clarkson
Coleman
Cornish
Davidson
Davies
Dickens
Dowd
Duncan
Dyer
Edmunds
Ellison
Ferguson
Fisher
Forsyth
Fraser
Gibson
Gill
Glover
Graham
Grant
Gray
Greene
Hamilton
Hardacre
Harris
Hart
Hemmings
Henderson
Hill
Hodges
Howard
Hudson
Hughes
Hunter
Ince
Jackson
James
Johnston
Jones
Kelly
Kerr
King
Knox
Lambert
Langdon
Lawrence
Lee
Lewis
Lyman
MacDonald
Mackay
Mackenzie
MacLeod
Manning
Marshall
Martin
Mathis
May
McDonald
McLean
McGrath
Metcalfe
Miller
```

```
Mills
Mitchell
Morgan
Morrison
Murray
Nash
Newman
Nolan
North
Ogden
Oliver
Paige
Parr
Parsons
Paterson
Payne
Peake
Peters
Piper
Poole
Powell
Pullman
Quinn
Rampling
Randall
Rees
Reid
Roberts
Robertson
Ross
Russell
Rutherford
Sanderson
Scott
Sharp
Short
Simpson
Skinner
Slater
Smith
Springer
Stewart
Sutherland
Taylor
Terry
Thomson
Tucker
Turner
Underwood
Vance
Vaughan
Walker
Wallace
Walsh
Watson
Welch
White
Wilkins
Wilson
Wright
Young
```

5.6 Common TCP Ports

Port	Service
22	SSH, SFTP
25	SMTP
80	HTTP
88	Kerberos
110	POP3
139	SMB
143	IMAP
389	LDAP
443	SSL and HTTPS
445	Microsoft SMB Domain Server
465	SMTP
515	Line Printer (LPR), Line Printer Daemon (LPD)
548	AFP (Apple Filing Protocol) over TCP
554	RTSP
587	Authenticated SMTP
631	Internet Printing Protocol (IPP)
636	Secure LDAP
749	Kerberos 5 admin/changepw
993	IMAPS (SSL Mail IMAP)
995	POP3S (SSL Mail POP)

6. Links

- Program Website