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| |  |  | | --- | --- | | The README file | M. Rose | |  | Dover Beach Consulting, Inc. | |  | February 2002 | |

**The personal.tcl Mailbot**

### **Abstract**

The personal.tcl mailbot implements a highly-specialized filter for personal messages. It MUST not be used by people who receive mailing list traffic in their personal mailboxes.

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### **1. SYNOPSIS**

Create a [**configuration file**](#z337ya) and add this line to your ".forward" file:

"| LIB/mbot-1.1/personal.tcl -config FILE -user USER"

where "LIB" is where the Tcl library lives, "FILE" is the name of your configuration file, and "USER" is your username.

#### **1.1 Requirements**

This package requires:

* [**Tcl version 8.3**](http://sourceforge.net/projects/tcl/) or later
* [**tcl lib**](http://sourceforge.net/projects/tcllib/)
* [**TclX version 8.0**](http://sourceforge.net/projects/tclx/) or later

#### **1.2 Copyrights**

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Hold harmless the author, and any lawful use is allowed.

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### **2. PHILOSOPHY**

The mailbot's philosophy is simple:

* The mailbot receives all of your incoming personal mail.
* You ALWAYS copy yourself on every message you send, so that the mailbot receives all of your outgoing personal mail.
* The mailbot performs six tasks, all optional:
  + makes audit copies of your incoming and outgoing mail;
  + performs duplicate supression;
  + performs originator supression by rejecting messages from people who aren't your friends or on a guest list;
  + performs content supression by rejecting messages that contain attachments with extensions on your prohibited list;
  + sends a textual synopsis to your PDA; and,
  + sends a copy to your remote mailbox.

Do NOT use the personal.tcl mailbot if you receive mailing list traffic in your personal mailbox. When sending mail to a mailing list, either:

* use a "From" address that the personal.tcl mailbot will process as "impersonal" mail, (e.g., "hewes+ietf.general@example.com"); or,
* set the "Reply-To" for the message to the mailing list.

Consult [**Impersonal Mail**](#1664s55) for information on how "impersonal" mail is identified and processed.

#### **2.1 Guest Lists**

Guest lists are an effective mechanism for cutting back on excessive mail.

* when the mailbot receives a message from you, it adds any recipients it finds to a permanent-guest list;
* when the mailbot receives a message from someone on a guest list, it adds any recipients it finds to a temporary-guest list; but,
* when the mailbot receives a message from someone not on any guest list, they get a rejection notice.

Note that in order to promote someone to the permanent-guest list, you must send them a message (with a copy to yourself). In most cases, simply replying to the original message accomplishes this. Of course, if you don't want to promote someone to the permanent-guest list, simply remove that address (or your address) from the list of recipients in your reply.

Here are the fine points:

* rejection notices contain a passphrase that may be used at most once to bypass the guest list mechanism (notices also contain the original message to minimize type-in by the uninvited);
* a flip-flop is used to avoid mail loops; and,
* messages originated by an administrative address (e.g., "Postmaster") bypass the guest list mechanism (unless the message refers to a previously-rejected message, in which case it is supressed).

The rejection notice should be written carefully to minimize an extreme negative reaction on the part of the uninvited. Of course, by allowing a passphrase, this provides something of a CQ test for the uninvited -- if someone can't pass the test...

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### **3. BEHAVIOR**

#### **3.1 Arguments**

The mailbot supports the following command line arguments:

-config configFile: specifies the name of the configuration file to use; -debug boolean: enables debug output; -file messageFile: specifies the name of the file containing the message; -originator orginatorAddress: specifies the email-address of the originator of the message; and, -user userName: specifies the user-identity of the recipient.

Note that if "-user" is given, then the working directory is set to userName's home directory before configFile is sourced, and the umask is set defensively.

The default values are:

personal.tcl -config .personal-config.tcl \  
 -debug 0 \  
 -file - \  
 -originator "derived from message"

Given the default values, only "-user" need be specified. The reason is that if a message is being delivered to multiple local recipients, and if any of the ".forward" files are identical in content, then sendmail may not deliver the message to all of the local recipients.

A few other (sendmail related) tips:

* If sendmail is configured with smrsh, you'll need to symlink personal.tcl into the /usr/libexec/sm.bin/ directory.
* Make sure that tclsh8.0 is in the path specified on the third-line of personal.tcl.
* You should chmod your ".forward" file to 0600.

#### **3.2 Actions**

The mailbot begins by parsing its arguments, sourcing configFile, and then examining the incoming message:

1. If [**auditInFile**](#qsh70q) is set, a copy of the message is [**saved**](#206ipza) there.
2. If the message contains a previously-encountered "Message-ID", processing terminates.
3. If the message's originator can not be determined, a copy of the message is [**saved**](#206ipza) in the [**defaultMaildrop**](#3whwml4) and processing terminates.
4. The originator's email-address is examined:
   1. If the originator appears to be an [**automated administrative process**](#37m2jsg), and if a previously rejected email-address is found in the message, processing terminates.
   2. Otherwise, if the originator isn't [**the user**](#111kx3o), or [**a friend**](#46r0co2), or a permanent-access guest, or a temporary-access guest, and if [**noticeFile**](#3fwokq0) is set, then the message is rejected.
   3. Otherwise, each recipient email-address in the message's header is added to a guest list. (If the originator is [**the user**](#111kx3o), the permanent-guest list is used instead of the temporary-guest list.)
5. If the originator is the [**the user**](#111kx3o), then:
   1. If [**auditOutFile**](#1pxezwc) is set, [**saved**](#206ipza) there.
   2. Regardless, processing terminates.
6. If [**pdaMailboxes**](#4f1mdlm) is set, and if any plaintext is contained in the message, then the plaintext is sent to those email-addresses.
7. If [**remoteMailboxes**](#19c6y18) is set, and if the message is successful resent to those email-addresses, then processing terminates.
8. A copy of the message is [**saved**](#206ipza) in the [**defaultMaildrop**](#3whwml4) and processing terminates.

#### **3.3 The Configuration File**

There are two kinds of information that may be defined in configFile: [**configuration options**](#1y810tw) and [**configurable procedures**](#28h4qwu).

Here's a simple example of a configFile for a user named "example":

set options(dataDirectory) .personal  
 set options(defaultMaildrop) /var/mail/example  
 set options(logFile) [file join .personal personal.log]  
 set options(noticeFile) [file join .personal notice.txt]

#### **3.3.1 Configuration Options**

configFile must define [**dataDirectory**](#2xcytpi) and [**defaultMaildrop**](#3whwml4). All other configuration options are optional.

#### **3.3.1.1 dataDirectory**

The directory where the mailbot keeps its databases. The subdirectories are:

badaddrs: the directory of rejected email-addresses inaddrs: the directory of originator email-addresses msgids: the directory of Message-IDs outaddrs: the permanent-guest list phrases: the directory of at-most-once passphrases tmpaddrs: the temporary-guest list

If you want to remove someone from a guest list, simply go to that directory and delete the corresponding file.

#### **3.3.1.2 defaultMaildrop**

The filename where messages are [**saved**](#206ipza) for later viewing by your user agent.

#### **3.3.1.3 auditInFile**

The filename where messages are [**saved**](#206ipza) for audit purposes.

#### **3.3.1.4 auditOutFile**

The filename where your outgoing messages are [**saved**](#206ipza) for audit purposes.

#### **3.3.1.5 dropNames**

A list of filename extensions for attachments that automatically cause the message to be rejected.

#### **3.3.1.6 friendlyDomains**

A list used by [**friendP**](#46r0co2) giving the domain names where your friends live.

#### **3.3.1.7 friendlyfire**

If present and true, then someone sending a message both to you and someone you've previously sent mail to, is considered a friend.

#### **3.3.1.8 logFile**

The filename where the mailbot [**logs**](#1rvwp1q) its actions.

#### **3.3.1.9 myMailbox**

Your preferred email-address with commentary text, e.g.,

Arlington Hewes <hewes@example.com>

#### **3.3.1.10 noticeFile**

The filename containing the textual notice sent when a message is rejected. Note that all occurrances of "%passPhrase%" within this file are replaced with an at-most-once passphrase allowing the originator to bypass the mailbot's filtering. Similarly, any occurrences of "%subject%" are replaced by the "Subject" of the incoming message.

#### **3.3.1.11 pdaMailboxes**

The email-addresses where a textual synopsis of the incoming message is sent.

#### **3.3.1.12 remoteMailboxes**

The email-addresses where a copy of the incoming message is resent.

#### **3.3.2 Configurable Procedures**

All of these procedures are defined in personal.tcl. You may override any of them in configFile.

#### **3.3.2.1 adminP**

proc adminP {local domain}

Returns "1" if the email-address is an automated administrative process.

#### **3.3.2.2 friendP**

proc friendP {local domain}

Returns "1" if the email-address is from a [**friendly domain**](#3o7alnk) or sub-domain.

#### **3.3.2.3 ownerP**

proc ownerP {local domain}

Returns "1" if the email-address refers to the user (as determined by looking at [**myMailbox**](#2grqrue), [**pdaMailboxes**](#4f1mdlm), and [**remoteMailboxes**](#19c6y18).

#### **3.3.2.4 saveMessage**

proc saveMessage {inF {outF ""}}

Saves a copy of the message contained in the file inF. If the destination file, outF, isn't specified, it defaults to the [**defaultMaildrop**](#3whwml4).

#### **3.3.2.5 findPhrase**

proc findPhrase {subject}

Returns "1" if a previously-allocated passphrase is present in the subject. If so, the passphrase is forgotten.

#### **3.3.2.6 makePhrase**

proc makePhrase {}

Returns an at-most-once passphrase for use with a rejection notice.

#### **3.3.2.7 pruneDir**

proc pruneDir {dir type}

Removes old entries from one of the mailbot's [**databases**](#2xcytpi). The second parameter is one of "addr", "msgid", or "phrase".

#### **3.3.2.8 tclLog**

proc tclLog {message}

Writes a message to the [**logFile**](#1hmsyys).

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### **References**



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### **Author's Address**

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### **Appendix A. Impersonal Mail**

If [**impersonalMail**](#2afmg28) returns a non-empty string then the message is processed differently than the algorithm given in [**Actions**](#44sinio). Specifically:

1. If the message contains a previously-encountered "Message-ID", processing terminates.
2. If the message's originator can not be determined, processing terminates.
3. The value returned by [**impersonalMail**](#2afmg28) is the folder's name and is broken into one or more components seperated by dots ("."). If there aren't at least two components, or if any of the components are empty (e.g., the folder is named "sys..announce"), then the message is bounced.
4. If [**mappingFile**](#4h042r0) exists, that file is examined to see if an entry is present for the folder. If so, the message is processed according to the value present, one of:"ignore": the message is silently ignored; "bounce": the message is noisily bounced; or, otherwise: the message is resent to the address.  
   Regardless, if an entry was present for the folder, then processing terminates.
5. The message is [**saved**](#206ipza) in a file whose name is constructed by replacing each dot (".") in the folder name with a directory seperator (e.g., if the folder is named "sys.announce", then the file is called "announce" underneath the directory "sys" underneath the directory identified by [**foldersDirectory**](#1jlao46).
6. Finally, the file identified by [**foldersFile**](#2iq8gzs) is updated as necessary.

#### **A.1 Configuration Options**

If "impersonal" mail is received, then [**foldersFile**](#2iq8gzs) and [**foldersDirectory**](#1jlao46) must exist.

#### **A.1.1 foldersDirectory**

The directory where the mailbot keeps private folders.

#### **A.1.2 foldersFile**

This file contains one line for each private folder.

#### **A.1.3 announceMailboxes**

The email-addresses where an announcement is sent when a new private folder is created.

#### **A.1.4 mappingFile**

The file consulted by the mailbot to determine how to process "impersonal" messages. Each line of the file consists of a folder name and value, seperated by a colon (":"). There are three reserved values: "bounce", "ignore", and "store".

#### **A.2 Configurable Procedures**

All of these procedures are defined in personal.tcl. You may override any of them in configFile.

#### **A.2.1 impersonalMail**

proc impersonalMail {}

If the message is deemed "impersonal", return the name of a corresponding private folder; otherwise, return the empty-string.

Many mail systems have a mechanism of passing additional information when performing final delivery using a program. With modern versions of sendmail, for example, if mail is sent to a local user named "user+detail", then, in the absense of an alias for either "user+detail" or "user+\*", then the message is delivered to "user". The trick is to get sendmail to pass the "detail" part to the mailbot.

At present, sendmail passes this information only if procmail is your local mailer. Here's how I do it:

\*\*\* \_alias.c Tue Dec 29 10:42:25 1998  
 --- alias.c Sat Sep 18 21:51:35 1999  
 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
 \*\*\* 813,818 \*\*\*\*  
 --- 813,821 ----  
 define('z', user->q\_home, e);  
 define('u', user->q\_user, e);  
 define('h', user->q\_host, e);  
 +   
 + setuserenv("SUFFIX", user->q\_host);  
 +   
 if (ForwardPath == NULL)  
 ForwardPath = newstr("\201z/.forward");

This makes available an environment variable called "SUFFIX" which has the "details" part. The drawback in this approach is that this information is lost if the message is re-queued for delivery (what's really needed is an addition to the .forward syntax to allow macros such as $h to be passed).

The corresponding impersonalMail procedure is defined as:

proc impersonalMail {} {  
 global env  
  
 return $env(SUFFIX)  
 }

#### **A.2.2 processFolder**

proc processFolder {folderName mimeT} { return $string }

If an entry for the folder exists in the [**mappingFile**](#4h042r0), and if the value for that entry is "process", then this procedure is invoked to return a string indicating what action to take (cf., [**Impersonal Mail**](#1664s55)).

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### **Appendix B. An Example configFile**

Here is the ".forward" file for the user "hewes":

"|/usr/pkg/lib/mbot-1.1/personal.tcl   
 -config .personal/config.tcl -user hewes"

(Of course, it's all on one line.)

Here is the user's ".personal/config.tcl" file:

array set options [list \  
 dataDirectory .personal \  
 defaultMaildrop /var/mail/hewes \  
 auditInFile [file join .personal INCOMING] \  
 auditOutFile [file join .personal OUTGOING] \  
 friendlyDomains [list tcp.int example.com] \  
 logFile [file join .personal personal.log] \  
 myMailbox "Arlington Hewes <hewes@example.com>" \  
 pdaMailboxes hewes.pager@example.com \  
 noticeFile [file join .personal notice.txt] \  
 foldersDirectory [file join .personal folders] \  
 foldersFile [file join .personal .mailboxlist] \  
 announceMailboxes hewes+sys.announce@example.com \  
 mappingFile [file join .personal mapping] \  
 friendlyFire 1 \  
 dropNames [list \*.bat \*.exe \*.src \*.pif \*.wav \*.vbs] \  
 ]  
  
 proc impersonalMail {} {  
 global env  
  
 return $env(SUFFIX)  
 }

Note that because [**remoteMailboxes**](#19c6y18) isn't defined, personal messages are ultimately stored in the user's [**defaultMaildrop**](#3whwml4).

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### **Appendix C. Acknowledgements**

The original version of this mailbot was written by the author in 1994, implemented using the safe-tcl package (Borenstein and Rose, circa 1993).