

MailStop

**an SMTP/POP2 mail-server
for the Macintosh**



MailStop

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The POPmail package (see its associated documentation) is software that allows a networked Mac or PC user to send mail to and receive mail from other users on their local network (LocalTalk or Ethernet) via a **mail-server** that understands POP2 (Post Office Protocol Version 2) and SMTP (Simple Mail Transfer Protocol). If the local network is connected directly or indirectly (via a gateway such as a FastPath) to the campus backbone Ethernet, then the users also have access to the Internet and BITNET (and many other networks besides).

A **mail-server** is like a file-server, but instead of just allowing client users on the network to store and retrieve *files*, a mail-server receives *mail* from anyone and stores the mail messages until the final recipient user on the network retrieves the messages. Think of a mail-server as a collection-point, a networked “telephone answering machine.” The mail-server machine is always on, waiting for incoming mail or for a client’s request to retrieve stored messages. The mail-server could be a mainframe or workstation (such as a UNIX machine) running popd (“the POP2 daemon”), or it could be a Macintosh running MailStop.

So MailStop is a mail-server application that runs on the Macintosh. If your department or group wants to run POPmail but doesn’t wish to have anything to do with setting up a UNIX mail-server machine or getting access to one, then MailStop may be just what you need. MailStop can give you the wide connectivity of UNIX and the ability to correspond with recipients on the Internet or BITNET. To run MailStop (and POPmail for that matter), you will need a Macintosh to be your mail-server machine. You will also need the POPmail application (or older HyperCard POPmail stack) for the client Macintoshes, and the MacTCP drivers. The POPmail application and MailStop are available (for free) from the Microcomputer HelpLine. The Microcomputer Center is able to distribute MacTCP (free) to the University of Minnesota community under a site license from Apple Computer. You may retrieve all the software from the Mac Information Server. The distribution (except for the MacTCP drivers) is also available via anonymous ftp from boombox.micro.umn.edu.

How does MailStop work?

When setting up your mail system, you typically designate one machine to run MailStop and to be the mail-server or “post-office” machine. This means that this machine will stay on (and connected to the network) all the time; mail from other machines may arrive at any hour of the day or night, and the mail server must be available to receive and store it until the actual recipient fetches it. You may dedicate a Macintosh to be the mail-server if you wish, and run nothing else on it. This will give you the best performance. You may also run it concurrently with AppleShare on a Mac that is an AppleShare file server. This may be the most attractive option if you are already dedicating a Mac as a file-server. You may also run MailStop in the background on a Mac that is used for other things; beware however that if this Mac is shut down or if it crashes, your mail-server goes down too. If you choose to run MailStop concurrently with AppleShare, a 2MB (or better) Mac is recommended. An Ethernet card will definitely enhance performance, but is an optional addition to the server Macintosh. The server must have a SCSI hard disk to hold incoming messages.

Client Mac users will run the POPmail application on their Macs. The POPmail application will query the mail-server for any waiting messages. The POPmail application will also send outgoing mail to either the mail-server (if the recipient has a username on the server) or to another machine (a “relay”) for delivery.

There are two steps to getting things set up: first you must configure MacTCP, next you need to configure MailStop on the server Macintosh.

Setting up MacTCP.

How you do this will vary depending on whether:

- Your server Macintosh is on an isolated LocalTalk net.
- Your server Macintosh is on LocalTalk with a gateway to Ethernet.
- Your server Macintosh is on Ethernet.

See the document *Setting up MacTCP* for information on your configuration, or contact the Microcomputer Helpline. You can't set up MailStop until you do this. So go do this first. The section **MacTCP configurations** near the end of this document should help a little. It is recommended that you use MacTCP 1.1 (or better).

Setting up MailStop.

If you plan to run MailStop concurrently with AppleShare 2.x, you will first need to install it as a concurrent application. To do this, shut down the AppleShare server if it is running, and restart the server Mac using a System Tools floppy disk. Eject the disk (Eject item in Finder File menu) and insert the floppy containing MailStop. Drag a copy of MailStop into the Server Folder. Restart the Macintosh. When AppleShare comes back up, go into AppleShare Admin and use the "Set Concurrent startup app" menu item (in the Server menu) to select MailStop as your concurrent application. Quit from AppleShare Admin and shut down the server. When you restart the Macintosh, the AppleShare server will launch first followed by MailStop. MailStop will replace the AppleShare status screen.

If you plan to run MailStop in the background or with AppleShare 3.x, simply copy it onto your hard disk and launch it (double-click on it) like any other application. Before you do this, you should have installed and configured the MacTCP drivers.

In either case, MailStop will present the following configuration dialog once it is running (Figure 1). Things you need to do:

- Fill in the host name.
- Fill in the relay host name.
- Select your timezone or GMT offset.
- When you are satisfied with the above three, click on "Update Info".
- Add any users (clients of the mail-server) you wish.
- Choose "Run as a mail-server" from the network menu.

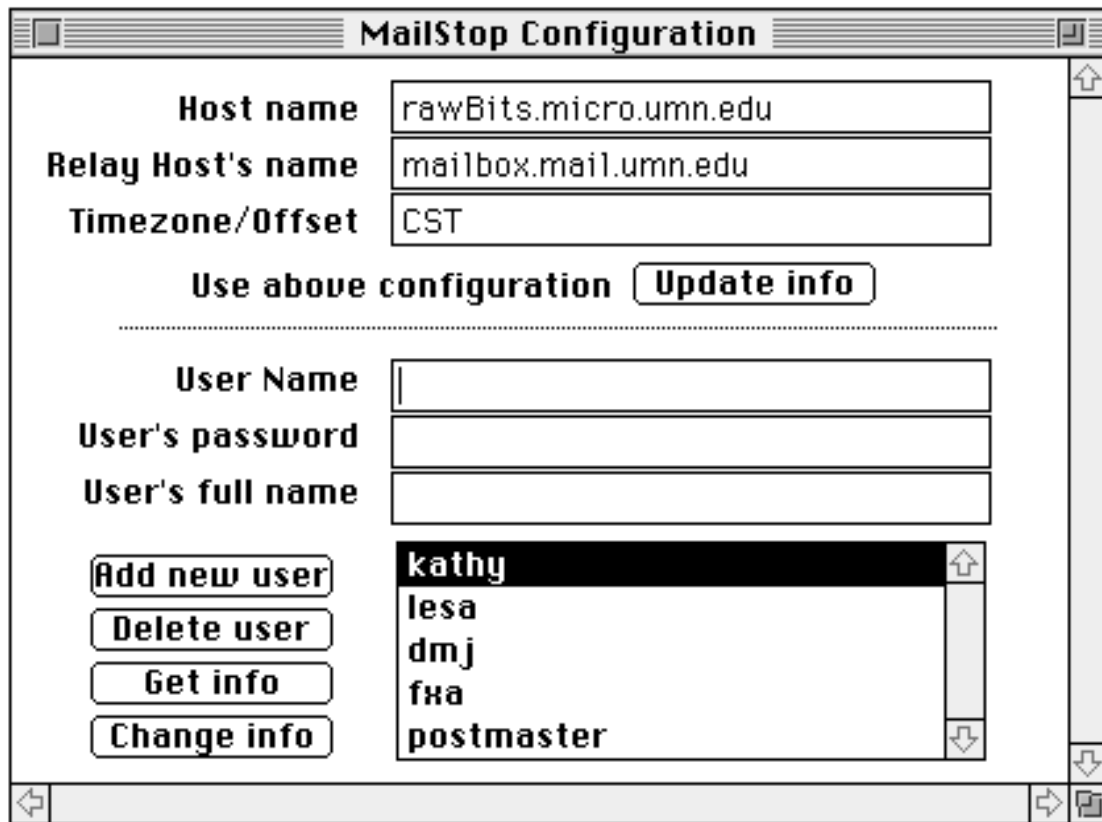


Figure 1: MailStop Configuration Window

Setting host names. The Host Name should be the name you selected for your mail-server. The Relay-Host Name should be the name of some well-connected machine nearby. On the Twin-Cities campus, use

mail.unet.umn.edu

as a relay-host. If you are setting things up for an isolated LocalTalk, there really is no other machine nearby; in this case **you should leave the Relay Host Name blank.**

Setting timezone or GMT offset. If you have a timezone (Central Standard Time is CST; Central Daylight Saving Time is CDT for example), use it. It is also acceptable to use your area's offset from GMT. The GMT offset refers to how many hours and minutes ahead or behind you are from Greenwich Mean Time. In Minnesota, Central Standard Time corresponds to a GMT offset of -0600 and Central Daylight Saving Time corresponds to an offset of -0500. You may need to adjust accordingly depending on where you are (EST is -0400, etc.). Also you need to adjust this if and when Daylight Savings Time starts in the Spring and ends in the Fall.

Update Info. When you make changes to these first three items, you need to click on the "Update Info" button to make the changes take effect.

Adding new users. To add a mail user to the server, type the username into the appropriate box. Usernames are typically 3 to 10 characters, eg. "daniel". Add the user's password. Passwords should have both letters and numbers in them for more security. Eg: "4times4"

would be a good password; "Joan" would be a poor one. Finally, add the user's full name in its place ("Daniel Torrey"). Then click on "Add New User". The new user will show up in the list of users.

Starting mail-service. Choose "Run as a mail-server" from the Network menu to start the mail-service going. If you select "Log Transactions" also, a detailed history of all mail transactions will be kept and made available to the postmaster. You do not need to stop the mail-server to add any additional users, or indeed to change any of the configuration information. You can close the MailStop Configuration window when you are done with it if you wish; the Configure item in the File menu will bring the Configuration window back up if you have sent it away. The next time you launch MailStop, it will know its hostname and will assume that you want it to turn on mail-service after it initializes; so it will go right into mail-server mode.

Odds and Ends.

Deleting users. To delete a user select the user from the list and then click on "Delete User".

Getting information on a user. To get information on an existing user, select the user from the list and click on "Get Info". The information will be displayed. The password will be displayed with "bullets" ('•••••'). If a user has forgotten his password, you cannot find out what it was, but you can change it: see next paragraph.

Changing information for a user. To change information for an existing user, type in the user's name, the changed password and/or full-name and click on the "Change Info" button. The changes take effect immediately.

Administration: the postmaster. When MailStop first runs, it automatically defines one special user: **postmaster**, and assigns the postmaster a random password. Change this password to something of your choice (see "Changing information..." above) One person should assume the role of postmaster. The postmaster is special because trouble reports, log and status information are sent to this user. The postmaster should periodically check his/her mail with the POPmail client application. Two particular things the postmaster should watch for: first, if disk space is getting low, trouble awaits; second, a large number of unsuccessful transactions may mean someone is trying to break in to the server. Both these statistics are available to the postmaster.

Storage of mail. MailStop stores its state in a folder called *MailStop Spool* . If MailStop is running on a normal (not AppleShare) system, the MailStop Spool folder is created in the same folder as MailStop. If MailStop is running concurrently with AppleShare, it places MailStop Spool inside a folder called *Preferences* , within the Server Folder (the Server Folder is AppleShare's equivalent of the System Folder). Note: Versions of MailStop prior to 1.0.4 placed MailStop Spool in the Preferences folder within the System Folder even on non AppleShare systems. If you are upgrading from a prior version and do not run with AppleShare, drag the old MailStop Spool folder (and all its contents) from its old place into the same folder as MailStop.

Space recovery. When you delete a user, although the deleted user can no longer send or fetch mail, his mailbox (and any un fetched mail in it) is not deleted immediately. This allows the administrator to "undelete" an accidentally deleted user by creating a new user with the same username as the deleted one. The next time MailStop is launched however, the space held by previously deleted users is recovered; all bets are off now. Note: Yes, this is

documented, and yes, it is a feature, but it was not placed here for administrator convenience. It is here to avoid certain concurrency problems, and its “undelete” use is purely incidental. Don’t bank on its being around for ever. Also beware that this leads to the following kind of problem: say you delete a user called julie (which belonged to Julie Thorndycraft) and then immediately add a user called julie (to belong to Julie Clapp); bingo, the second julie inherits the first julie’s un fetched mail!

Hosts with two names. Most normal, well-behaved mail-servers have a single well-known domain name. A normally configured MailStop knows its name and only accepts mail destined for it. Sometimes, a mail-server may be known by two names and users expect that mail sent to either of those two names wind up on the same machine. While this is frowned upon, a little known hack in configuring MailStop lets you accomplish this. In the Host Name box, type first the most used name. Then a space and the secondary, less used hostname. Now MailStop will accept mail for either host. And **No**, you may not type in more than two names. A hack is a hack.

Bugs.

First the usual caveats: if you run with a bunch of INITs, in particular INITs that are active on the network, you are on your own. Screen-savers are not recommended (just turn down the brightness manually 'eh?) either.

1. For those who want to use an AppleShare file-server for *triple* use: running QuickMail, MailStop and AppleShare, there is a known problem. MailStop is incompatible with the QuickMail Nameserver application (CE Software). QuickMail runs okay but the Nameserver does not. Phew.

2. You cannot run the POPmail application on the same Mac as MailStop and use the application to “self-connect” to the local MailStop. MultiFinder/Process Manager can only spread processor time around if all processes dutifully call GetNextEvent and field a normal eventloop. The POPmail application occasionally enters a state when it does not relinquish the processor. Consequently it tries to talk to its own Mac but does not let the Mac talk back!

3. If you use MailStop concurrently on an AppleShare file server with Microsoft Mail (don’t laugh, some folks *actually do this*), beware that Microsoft Mail has a habit of throwing up various modal dialogs, and when it does this, it does not relinquish the processor. Big trouble, since the modal dialog could be up there for days before the administrator notices. Not saying that you cannot run MailStop with Microsoft Mail; saying that it would not be smart to do so.

Stuff...

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MailStop was written with MacApp® : © 1985 - 1992 Apple Computer, Inc.
The MacApp software is proprietary to Apple Computer, Inc. and is licensed to the University of Minnesota for distribution only for use in combination with MailStop and POPmail.

Apple Computer, Inc. makes no warranties whatsoever, either express or implied, regarding

this product, including warranties with respect to its merchantability or its fitness for any particular purpose.

Neither does the University of Minnesota.

For hackers only

Relay-hosts: MailStop and the POPmail client use a number of extensions to POP2 to get their job done. The POPmail client peeks at the POP2 banner line from MailStop (or another pop daemon). If he sees the keyword POP2+, he assumes that this host will *not* accept SMTP mail to be forwarded, but *may* know of a host that will. The client can find out the name (and IP address) of this relay host by issuing the “rela” command to POP2 after authentication. MailStop will respond with either:

+ foo.mumble.edu

or simply with:

+

The former identifies the relay host. The latter means that while it won't accept SMTP mail to any other host, it does not know of anyone who will either (this typically occurs on an isolated LocalTalk).

Authentication: The server offers the client a DES encryption key on the banner line. If the client wants, it can send an encrypted password rather than a cleartext one.

Mail-drops: If the same message is sent to a bunch of users on the machine running MailStop, only one copy of the message is actually stored. If a lot of mail gets sent to groups, this could save considerable space.

Locks: If a client crashes while fetching mail (or otherwise exits improperly), MailStop does not know that the client is dead. It assumes that the client is just slow. Of course after about 5 minutes, MailStop figures out that the client is probably dead and times out that connection. If that client reboots and reconnects *before* MailStop has timed out the original, MailStop assumes that two instances of the same client are competing for the (same) maildrop, and it locks the new instance out ("Go away, you have no mail.") This enrages the client ("I know damn well I have mail. Don't lie to me.") Sorry about this; life is tough. Wait a while and try again later. I suppose you could re-start the server if you're really impatient.

MacTCP configurations: You have to play some MacTCP configuration tricks to get the server to run on LocalTalk. First, if it is a LocalTalk connected to Ethernet by a gateway (such as a FastPath), you need to tell the gateway to set aside a static address for the Mac running MailStop. Then you need to configure MacTCP on the server Mac to obtain that static address *manually*. The client MacTCPs are set up to get their addresses from the gateway (the *server* setting in the Control Panel AdminTCP dialog).

If the LocalTalk is isolated (not connected to an Ethernet) then obviously there is no gateway to inform about static addresses; the server Mac is just set up to grab a fixed one (again *manually*), and all client Macs have local Hosts files that map the server's domain name to its address. The client Macs are set up to obtain IP addresses *dynamically* over some reasonable range.

Change History.

0.9b1 - Configuration dialog got warnings and popup.
0.9b2 - Removed ellipsis from Log transactions menu. (natalie)
All dialogs got a timed filterproc to prevent bozos
from locking out the listeners. So modaldialogs now time-out.
Re-wraps lines after address-munging.
0.9b3 - Special-cased timed modaldialogs so that they only occur while running
as a daemon and not in general.
Added soft failure (vs old hard failure with alert) when server runs out of
disk space. Sender is notified via SMTP 452, the spool file is deleted, logging
stops if it was turned on, but MailStop keeps rolling right along (hoping some
POP sessions will free up some room). (dmj)
Added safe and complete user-delete with cleanup of orphan spool files.
0.9b4 - Dirty-bit set on change to user-info. Dotted num domain retained.
0.9b5 - Bullets shown for passwords. (Len)
0.9b6 - Added POP2+ opcode (RELA) for easy client configuration. (earl, grg)
0.9b7 - RETR without preceding READ was flubbed; fixed to remember length. (dmj)
0.9b8 - Two concurrent POP sessions user object locking (dmj)
Auto-reboot into server mode (Len)
Date checking/insertion added.
Non-AppleShare bkgnd optimizations (immediate release on idleEnd) added.
"Do you really want to quit?" obnoxious alert added.
Two extra listeners added for unfriendly or overloaded machines.
0.9b9 - Extended the extended RELA opcode to help the poor DOS box clients. (earl)
1.0b9 - Release version of July 1990. Compiled with 2.0b9
1.0b10 - Mods to compile under MacApp 2.0. DNS fix.
1.0 - Release version under MacApp 2.0
1.0.1 - Cosmetics of config interface cleaned up. Uses NewPermHandle. Make for CMinus.
1.0.2b1 Periodic destruction and regeneration of "old" streams to handle suspected stream
brain-damage on very heavily loaded or unfriendly machines.
1.0.2b2 Handle duplicate ackd's. Never wait for reads/always check last char of handle.
Add the (ick) level 2 XOR passwd stuff for PC clients.
1.0.2b4 Prevent listeners from cloning themselves when terminated with extreme prejudice.
"Do you really want to quit?" obnoxious alert removed (almost...)
1.0.2b5 Set Push flag on banner lines to pacify IBM mainframes.
1.0.3 Compiled under System 7/MacApp 2.0.1. DNS patched. Not released to internet.
1.0.4 Compiled for System 7. Now places spool in default directory if not AppleShare.
DNS totally removed, since IBMs are more educated now. Knock back ULP timeout.
1.0.5 Relinked to avoid MacApp+MPW 3.0 lib segmentation bug.
1.0.6 Patched the System 7 patch thanks to dmj.
1.0.7 Timezone became a regular text item rather than a popup.
1.0.8 Debug version patch.
1.0.9 Eric Enwall's two-hostname additions.
1.1.0 Dotted-num accepted in "[...]" format.
1.1.1 Changed timeouts for SLIP. Not released.
1.1.2 Changed timeouts for SLIP. Open file bugfixes added.