mini−HOWTO install qmail with MH

Table of Contents

mini−HOWTO install qmail with MH

Christopher Richardson (rdn@tara.n.eunet.de)

v1.4, 5 March 1998

I am just documenting my installation experiences to offer some help to other users who wish to use the above combination for their email. v1.4 − I have finally got a new Linux box running so I decided to update this mini−howto

---

---

1. Introduction

My thanks to all netizens who have helped me, especially Tony Nugent (tony@trishul.sci.gu.edu.au), David Summers (david@summersoft.fay.ar.us) and S.u.S.E (Linux distribution) who has made installing Linux so much easier, and the authors of the above excellent programs.

What is qmail and why should I use it? Here is the author´s (Dan Bernstein) blurb:

qmail is a secure, reliable, efficient, simple message transfer agent. It is meant as a replacement for the entire sendmail−binmail system on typical Internet−connected UNIX hosts.

Secure: Security isn't just a goal, but an absolute requirement. Mail delivery is critical for users; it cannot be turned off, so it must be completely secure. (This is why I started writing qmail: I was sick of the security holes in sendmail and other MTAs.)

Reliable: qmail's straight−paper−path philosophy guarantees that a message, once accepted into the system, will never be lost. qmail also supports maildir, a new, super−reliable user mailbox format. Maildirs, unlike mbox files and mh folders, won't be corrupted if the system crashes during delivery. Even better, not only can a user safely read his mail over NFS, but any number of NFS clients can deliver mail to him at the same time.

Efficient: On a Pentium under BSD/OS, qmail can easily sustain 200000 local messages per day−−−that's separate messages injected and delivered to mailboxes in a real test! Although remote deliveries are inherently limited by the slowness of DNS and SMTP, qmail overlaps 20 simultaneous deliveries by default, so it zooms quickly through mailing lists. (This is why I finished qmail: I had to get a big mailing list set up.)

Simple: qmail is vastly smaller than any other Internet MTA. Some reasons why: (1) Other MTAs have separate forwarding, aliasing, and mailing list mechanisms. qmail has one simple forwarding mechanism that lets users handle their own mailing lists. (2) Other MTAs offer a spectrum of delivery modes, from fast+unsafe to slow+queued. qmail−send is instantly triggered by new items in the queue, so the qmail system has just one delivery mode: fast+queued. (3) Other MTAs include, in effect, a specialized version of inetd that watches the load average. qmail's design inherently limits the machine load, so qmail−smtpd can safely run from your system's inetd.

Replacement for sendmail: qmail supports host and user masquerading, full host hiding, virtual domains, null clients, list−owner rewriting, relay control, double−bounce recording, arbitrary RFC 822 address lists, cross−host mailing list loop detection, per−recipient checkpointing, downed host backoffs, independent message retry schedules, etc. In short, it's up to speed on modern MTA features. qmail also includes a drop−in ``sendmail'' wrapper so that it will be used transparently by your current UAs.

---

2. My System Details

SuSE Linux Distribution 5.1 with 2.0.33 kernal.

PPP link to ISP

---

3. Qmail Installation

Follow the INSTALL instructions exactly.

Notes:

Please take the time to read the Fine documentation completely. The numerals refer to the installation steps in the above INSTALL doc.

- 2 − I had to set up the groups and users manually as per INSTALL.ids
- 7 − ./qmail−makectl did not work on my system. I added my domain name (mickey.n.eunet.de) manually in /var/qmail/control/me
- 23 − Make sure qmail−smtpd is spelt correctly in the inetd−conf file. (I spelt it incorrectly i.e. qmail−smptd, which took me two days to find:( ) smtp stream tcp nowait qmaild /var/qmail/bin/tcp−env tcp−env /var/qmail/bin/qmail−smtpd

3.1 Maildir2smtp

Dan Bernstein has provided a package for sending queued email to an ISP via dial−in. This package is available as serialmailxxx from his site.

Install this package as described in the man page (Thanks Rupert Mazzucco (maz@pap.univie.ac.at), it works out of the box!

```
maildir2smtp - blast a maildir across SMTP

maildir2smtp is designed to pass messages along a SLIP  or
PPP  link.  To set this up on the disconnected end, create
a new maildir in alias:

   # maildirmake ~alias/pppdir
   # chown -R alias ~alias/pppdir

Put

   :alias-ppp

into control/virtualdomains and

   ./pppdir/

into ~alias/.qmail-ppp-default.  Don't  forget  the  extra
slash in pppdir/.  Then, in the PPP startup script, do

   maildir2smtp ~alias/pppdir alias-ppp- $IP `hostname`

replacing  $IP with the remote IP address.
```

Notes:

- Please read the Fine manual page completely.

- Maildir2smtp requires the dotted IP address of your mail server. If you do not have this then ping YourMail.host.country which will return the IP.
- This command can be included in your login script to flush all queued mail after logging in to your ISP.

---

4. MH Installation

In addition to this, I also replaced /mh−6.8.4/mts/sendmail/smail.c with Dan Bernstein´s mh−qmail−smail.c

This is what my mh−6.8.4/conf/MH looks like:

```
bin     /usr/bin/mh
etc     /usr/lib/mh
#mail
#mandir /usr/man
#manuals        standard
chown   /bin/chown
#cp     cp
#ln     ln
#remove mv -f
cc      gcc
ccoptions -traditional -O2 -m486 -D_NFILE='getdtablesize()'
          -DSIGEMT=SIGUSR1
curses  -lncurses
#ldoptions      -s
#ldoptlibs
lex     flex
#oldload        off
#ranlib on
mts     sendmail
#mf     off
#bboards        off
#bbdelivery     off
#bbhome /usr/spool/bboards
pop     on
popdir  /usr/lib/mh
sharedlib       sys5
slflags -fPIC
slibdir /usr/lib
mailgroup       mail
signal  void
sprintf int
#editor prompter
#debug  off
#regtest        off
options ATHENA
options BIND
options DPOP
options DUMB
options FCNTL
options MHE
options MHRC
options MIME
options MORE='"/usr/bin/less"'
```

```
options OVERHEAD
options POP2
options POPSERVICE='"pop3"'
options RENAME
options RPATHS
options RPOP
options SOCKETS
options SVR4
options SYS5
options SYS5DIR
options TERMINFO
options UNISTD
options VSPRINTF
```

Notes:

- I have only compiled ``mts sendmail'' − read in comp.mail.mh somewhere that /smtp can cause problems. Dominic Mitchell (hdm@demon.net) wrote in comp.mail.mh (13 June 1997): ``Not quite. With this option MH still talks SMTP, just over a pipe and not over a network. You *really* need a line in your /.mh_profile which says: postproc: /usr/local/nmh/lib/spost Or whever it's kept on your system. This will pass the message directly to sendmail in the traditional manner. You're using qmail of course, so sendmail will be qmail's wrapper script, but that's just fine.'' Thanks Dominic.
- I have remmed out ``mail'' because I want to control it via mtstailor

4.1 mtstailor

As qmail delivers mail to the home directory (~/Mailbox). I added the following to my mtstailor

```
localname:      mickey
localdomain:    n.eunet.de
mmdfldir:
mmdflfil:       Mailbox
uucpldir:
uucplfil:
mmdelim1:       \001\001\001\001\n
mmdelim2:       \001\001\001\001\n
mmailid:        0
umincproc:
lockldir:
sendmail:       /usr/lib/sendmail
```

Notes:

- sendmail: /usr/lib/sendmail is a link to the qmail sendmail wrapper in /var/qmail/bin
- MH does not like the tilde notation (~/) use /home instead or leave blank which according to the docs defaults to $HOME.
- I recently installed MH and qmail on my office machine which is connect via ethernet. I added the following line to mtstailor: servers: mailserver.company.country

4.2 mh_profile

Here is my .mh_profile

```
Path: Mail
draft-folder: drafts
unseen-sequence: unseen
AliasFile: /home/rdn/.mh_aliases
send: -msgid
comp: -form /home/rdn/.mymh-components
MailDrop: /home/rdn/Mailbox
```

Notes:

- I put in the MailDrop line to be ``sure to be sure''.

---

5. Fetchmail

I decided to use fetchmail because I have a multiuser (my family :). Linux and fetchmail delivers mail to the smtp port where qmail takes over.

Installation was no problem, multidrop works with the following .fetchmailrc :

```
poll PersonalMail.Germany.EU.net
protocol pop3
username myname
password mypassword
# the next two lines do the trick for multidrop
localdomains mydomain.de
is * here
# T2 of the fetchmail FAQ states that qmail needs this
forcecr
```

---

6. Exmh

This is my mailer by choice. I love it.

There is one problem − most pre−compiled TCL/TK packages have the security option compiled in. The following script .xserverrc.secure which came with SuSE solves this.

```
#!/bin/sh

#
# move this file to ~/.xserverrc, if you don't want to allow everybody to
# get access to your X-Server
#
if [ -x /usr/bin/keygen ]; then
    if [ ! -x /usr/bin/hostname -a ! -x /bin/hostname \
```

```
         -a ! -x /usr/bsd/hostname ];
    then
        echo "startx: can't get my hostname - exiting"
        exit 1
    else
        host=`hostname`
    fi

    xauth add $host:0 . `/usr/bin/keygen`
    sleep 2
    xauth add $host/"unix":0 . `/usr/bin/keygen`
    exec X :0 −auth .Xauthority $*
else
    exec X :0 $*
fi
```

7. Procmail

The qmail FAQ gives this command:

In /.qmail add the line

```
| preline procmail
```

Version 3.11pre7 has changed the default mail box variable. It used to be in config.h. It is now in src/authenticate.c:

```
#define MAILSPOOLHOME "/Mailbox"        /* watch the leading / */
                                        /* delivers to $HOME/Mailbox */
```

I have culled from comp.mail.mh ans comp.mail.misc some hints on a .procmailrc file. Thanks to everyone!

```
# A SAMPLE .PROCMAILRC FILE FOR NOVICES
# Written by Catherine Hampton <ariel@best.com>
# Version 1.1
# Updated 1/25/98
#
# Released to the Public Domain.
#
#
# SET VARIABLES

# Internal Variables
# the following have be modified by rdn 19980303

# Everyone says that the SHELL environment is essential
SHELL=/bin/sh               #Shell used to run procmail.  Be sure this points to
                            #your system's copy of sh.  DO NOT substitute a
                            #different shell unless you really know UNIX

LINEBUF=4096                #Needed to keep Procmail from choking on long
                            #"recipes", or instructions on what to do with
                            #particular kinds of email.
```

```
PATH=$HOME/bin:/bin:/usr/bin:/usr/local/bin:/usr/bin/mh:/usr/lib/mh:
                            #Path for your programs -- this is probably best
                            #left alone.

VERBOSE=off                 #Change this to "on" when you try a new recipe
                            #so that Procmail will log literally every step
                            #it takes.  DO NOT LEAVE IT ON, though, because
                            #it creates huge logfiles.

# Default Program & file locations

MAILDIR=$HOME/Mail          #you'd better make sure this directory exists

DEFAULT=$HOME/Mailbox         #default incoming mailbox for shell2-5 users
                            #on Best Internet.  Substitute the correct
                            #setting for your system.


LOGFILE=$MAILDIR/procmail.log #Logs message disposition.  Recommended -- otherwise
                            #errors are emailed to you. :/

FORMAIL=/usr/bin/formail        #useful for autoreply recipes.  If you
                                #are not on Best Internet, modify this to
                                #your system's copy of formail.

SENDMAIL=/usr/sbin/sendmail    #useful for autoreply recipes.  If you are
                               #not on Best Internet, modify this to point
                               #to your system's copy of sendmail.
```

Procmail is an excellently documented program. Read the man pages for examples on how to set up your .procmailrc file.

---

8. ISDN

I am including this although this has nothing to do with qmail or mh. But without a PPP line to your ISP there is no email at all. I had quite a bit of bother to get my ISDN working. The SusE distribution includes a configuration for ISDN, but I wanted something simpler. The stuff here was adapted from Bernhard Hailer's scripts. (Vielen, vielen dank!)

The following rc.config loads the necessary modules during initialisation:

```
#!/bin/bash
# This is adapted Bernhard Hailer's old script

LOCAL_NUMBER="91311234"        # tel no. 091311234
REMOTE_NUMBER="0911123456"     # ISP tel no.
LOCAL_IP="192.168.0.99"        # I have dynamic IP so this will do
REMOTE_IP="195.112.123.11"     # your ISP's gateway
DEVICE="ippp0"

SYSPATH="/sbin"
ISDNCTRL="$SYSPATH/isdnctrl"

case "$1" in
start)
        # turn on isdn
        insmod /lib/modules/2.0.33/net/slhc.o
```

```
        insmod /lib/modules/2.0.33/misc/isdn.o
        sleep 1
        # load the hisax module
        insmod /lib/modules/2.0.33/misc/hisax.o
                                   id=Tel0 type=5 protocol=2 irq=10 io=0x300
        echo "starting isdn4linux"
        # global
        $ISDNCTRL verbose 0

        $ISDNCTRL addif $DEVICE         # create new interface
        $ISDNCTRL addphone $DEVICE in $REMOTE_NUMBER
        $ISDNCTRL addphone $DEVICE out $REMOTE_NUMBER
        $ISDNCTRL eaz $DEVICE $LOCAL_NUMBER
        $ISDNCTRL l2_prot $DEVICE hdlc
        $ISDNCTRL l3_prot $DEVICE trans
        $ISDNCTRL encap $DEVICE syncppp
        $ISDNCTRL huptimeout $DEVICE 300
        $ISDNCTRL chargehup  $DEVICE off
        $ISDNCTRL secure $DEVICE on

        $SYSPATH/ifconfig $DEVICE $LOCAL_IP pointopoint $REMOTE_IP metric 1
        $SYSPATH/route add default $DEVICE
        $SYSPATH/ipppd /dev/ippp0 file /etc/ppp/options.ipppd &
        $SYSPATH/route del default

        ;;
stop)
        #turn off isdn
        rmmod hisax.o
        sleep 1
        rmmod isdn.o
        rmmod slhc.o
        echo "Shutting down isdn4linux"
        $ISDNCTRL delif ippp0
        ;;
*)
        echo "Usage: $0 (start|stop)"
        exit 1
        ;;
esac
```

I use the following script to dial out, it is called simply isdn on|off

```
#!/bin/bash
# This is based on an old script from Bernhard Hailer

IP_ADDRESS="195.112.123.11"

case "$1" in
on)


        echo "Calling ippp0"
        /sbin/isdnctrl dial ippp0
# the sleep is important as it gives the PPP time to settle down
        echo "Sleep for 8s for PPP handshake"
        sleep 8s
        /sbin/route add default ippp0
        echo "line open - checking...."
```

```
# check whether PPP negotiation was successful:
        set `ping -qc3 -i1 $IP_ADDRESS 2>/dev/null | grep transmitted`
        if [ $4 -gt 0 ];
        then
                echo "succeeded."
                echo "Starting fetchmail daemon"
                /usr/bin/fetchmail -d 600 -k -v -a -L /var/log/fetchmail
                echo "Flushing mail queue...."
                /usr/local/bin/serialmail/maildir2smtp
                            ~alias/pppdir alias-ppp- mail.server.ip.no `hostname`
        else
                echo "failed!"
                /sbin/isdnctrl hangup ippp0
        fi

;;

off)
                echo -n "Shutting down fetchmail daemon"
                /usr/bin/fetchmail --quit

                /sbin/isdnctrl hangup ippp0
                /sbin/route del default         # and delete route
                echo "You're off line"
;;

*)
        echo -e "\aUsage:"
        echo "isdn on"
        echo "isdn off"
;;

esac
```

The next lot is the ipppd options file /etc/ppp/options.ipppd

```
# Based on:
# Klaus Franken, kfr@suse.de
# Version: 27.08.97 (5.1)
#
# This file is copy by YaST from /etc/ppp/ioptions.YaST
#   to options.<device>

user "myuserid"

# my system name (only for CHAP!)
# name my_system_name

# accept IP addresses from peer
# use with dynamic IP
ipcp-accept-local
ipcp-accept-remote
noipdefault

# try to get IP address from interface
# option specific to ipppd (as opposed to pppd)
# use only with static IP
#useifip

# disable all header-compression
-vj
```

```
-vjccomp
-ac
-pc
-bsdcomp

# sometimes you need this:
#noccp

# max receive unit
mru 1524
# max transmit unit
mtu 1500

# If this machine is a server, force authentication by uncommenting one
# of the following. However, if this machine is a client, doing this will
# prevent a succesful connection! (message "peer refused to authenticate").
# So, only uncomment on a server.
# "+pap" / "+chap" NUR AKTIVIEREN, WENN DIES EIN SERVER IST!!!
#+pap
#+chap

# if you have problems with handshaking (no response for first
# lcp-package) try to decrease the retry-cycle. Default is 3 sec,
# try for example 2 sec:
# lcp-restart 2
```

9. Sources

Required Packages:

The net is so dynamic that it is pretty pointless to give sources. but for what it's worth:

- Find Qmail, setserial on http://www.qmail.org/
- Find MH on http://www.ics.uci.edu/~mh/
- Find glimpse on http://glimpse.cs.arizona.edu/
- Find Fetchmail on http://sagan.earthspace.net/~esr/fetchmail
- Find Exmh http://www.beedub.com/exmh
- Find Procmail ftp.informatik.rwth−aachen.de/pub/packages/promail

10. Disclaimers

The usual no guarantees, no money back, use at your own risk.

11. Postscript

Has anyone got mh working with Maildir? I have not tried – the principle of not fixing a running system. If you have got it working please mail me your instruction for inclusion in the next revision