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# Installing qmail under FreeBSD

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## Abstract

This document describes how to set up the **qmail** mail transfer agent on a **FreeBSD** system. These instructions are known to work with **FreeBSD** versions 4.2 through to 6.2, and it is expected they will work with versions earlier and later than that range. This document is intended to be quite minimalist. It contains only the raw instructions for installing **qmail** under **FreeBSD** distilled from the **qmail** documentation. As such, it is not a substitute for reading the documentation.

## 1. Pre-Installation

You need a **FreeBSD** system with the ports system installed. The machine should be connected to an active Internet connection.

You should always update the ports system before installing any new software from it, this will ensure you are getting the latest and most secure version of the software available. More information on how to use CVS to update the ports system is available at [The FreeBSD Project](#).

Of course if you want to receive email from the Internet you will need the **FreeBSD** system listed in an MX record of a correctly registered domain. The steps on how to do this will not be covered in this document.

You will need to know the Fully Qualified Domain Name (FQDN) of the **FreeBSD** machine. This is basically the DNS name of the machine. For example if your server's name is known in DNS as `mailserver.mydomain.com` when the instructions below ask you to type the text **HOSTNAME** you should replace the word **HOSTNAME** with the word **mailserver**. Or when the instructions ask you to enter the text **DOMAIN** you should replace that word with the words **mydomain.com**

The following Installation instructions must be performed as the user `root`.

## 2. Installation

### 2.1. Install qmail

```
# cd /usr/ports/mail/qmail  
# make all install clean
```

Check the boxes for:

```
SMTP_AUTH_PATCH  
QMAILQUEUE_PATCH  
BIG_TODO_PATCH
```

Click **OK**. After installation, enable **qmail** by running the script:

```
# /var/qmail/scripts/enable-qmail
```

### 2.2. Install tcpserver

```
# cd /usr/ports/sysutils/ucspi-tcp  
# make all install clean
```

Check the boxes for:

```
man  
ssl
```

Click **OK**.

### 2.3. Install checkpassword

```
# cd /usr/ports/security/checkpassword  
# make all install clean
```

### 2.4. Ensure man(1) can find the qmail man pages

Make the following change to the file `/etc/manpath.config`:

```
# echo "OPTIONAL_MANPATH /var/qmail/man" >> /etc/manpath.config
```

Then run:

```
# makewhatis
```

so that the manpages can be used immediately.

## 2.5. Permit access to the SMTP port

```
# echo "127.0.0.1:allow,RELAYCLIENT=\"\" > /etc/tcp.smtp
```

At this point, if you have a LAN on which client machines will require access to the SMTP port to send email, add the network part of the LAN's IP address space. For example, if hosts on the LAN are in the range 192.168.0.1 – 192.168.0.254, issue this command:

```
# echo "192.168.0.:allow,RELAYCLIENT=\"\" >> /etc/tcp.smtp
```

Finally, build the ruleset for **tcpserver**:

```
# echo :allow >> /etc/tcp.smtp  
# /usr/local/bin/tcprules /etc/tcp.smtp.cdb /etc/tcp.smtp.tmp < /etc/tcp.smtp
```

## 2.6. Modify skeleton directory files in /usr/share/skel

### 2.6.1. dot.cshrc

Find the following line in `dot.cshrc`:

```
set mail = (/var/mail/$USER)
```

and modify the file as follows:

```
#set mail = (/var/mail/$USER)  
setenv MAIL ~/Mailbox  
setenv MAILDIR ~/Maildir  
setenv MAILTMP ~/Maildir/tmp/tmpfile  
alias mail '/var/qmail/bin/maildir2mbox;/var/qmail/bin/qail'  
alias pine '/var/qmail/bin/maildir2mbox;/var/qmail/bin/pinq'  
alias elm '/var/qmail/bin/maildir2mbox;/var/qmail/bin/elq'
```

### 2.6.2. dot.shrc

Append the following lines to the end of `dot.shrc`

```
MAIL=~/Mailbox  
MAILDIR=~/Maildir  
MAILTMP=~/Maildir/tmp/tmpfile  
export MAIL MAILDIR MAILTMP  
alias mail='/var/qmail/bin/maildir2mbox;/var/qmail/bin/qail'  
alias pine='/var/qmail/bin/maildir2mbox;/var/qmail/bin/pinq'  
alias elm='/var/qmail/bin/maildir2mbox;/var/qmail/bin/elq'
```

### 2.6.3. dot.qmail

Create the file `dot.qmail` and add this line:

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```
./Maildir/
```

### 2.6.4. Maildir

Execute the following command to make the Maildir directory:

```
# /var/qmail/bin/mailedirmake /usr/share/skel/Maildir
```

## 2.7. Set up existing users for qmail

### 2.7.1. Create Maildir and .qmail

Execute the following commands for each existing user:

```
# cp -R /usr/share/skel/Maildir ~USERNAME/  
# chown -R USERNAME ~USERNAME/Maildir  
# cp /usr/share/skel/dot.qmail ~USERNAME/.qmail  
# chown USERNAME ~USERNAME/.qmail
```

### 2.7.2. Modify each user's shell startup file

Determine the login shell for each user, and modify the startup file for that shell in the manner described above.

If you are confident that a user has not modified their `.cshrc` and `.shrc` files, you can just copy the files `/usr/share/skel/dot.cshrc` and `/usr/share/skel/dot.shrc` over the files `~USERNAME/.cshrc` and `~USERNAME/.shrc`.

## 2.8. Edit the startup script for qmail

Append the following lines to the end of `/etc/rc.conf` to set some variables used in the **qmail** startup script to follow:

```
# qmail options  
qmail_smtp_enable="YES"  
qmail_pop_enable="YES"  
qmail_enable="YES"
```

In the following sections, **HOSTNAME** refers to the name of the localhost, and can be determined by running:

```
# hostname -s
```

**HOSTNAME.DOMAIN** refers to the machine's fully qualified domain name (FQDN), and can be determined with:

```
# hostname
```

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Obviously, **DOMAIN** refers to the domain in which the machine resides, and is the FQDN minus the **HOSTNAME** part.

Create `/var/qmail/rc`:

```
#!/bin/sh

#
# This script starts and stops the qmail mail functions.
#

# Suck in the configuration variables.
if [ -r /etc/defaults/rc.conf ]; then
    . /etc/defaults/rc.conf
    source_rc_confs
elif [ -r /etc/rc.conf ]; then
    . /etc/rc.conf
fi

case "$1" in
start)
    case ${qmail_smtp_enable} in
[Yy][Ee][Ss])
        # Start the qmail smtp daemon
        /usr/local/bin/tcpserver -H -R -c 255 -x /etc/tcp.smtp.cdb \
            -u 82 -g 81 0 25 /var/qmail/bin/qmail-smtpd &
        echo -n " qmail-smtp"
        ;;
    esac

    case ${qmail_pop_enable} in
[Yy][Ee][Ss])
        # Start the qmail pop daemon
        /usr/local/bin/tcpserver -H -R -c 255 0 110 \
            /var/qmail/bin/qmail-popup HOSTNAME.DOMAIN \
            /usr/local/bin/checkpassword /var/qmail/bin/qmail-pop3d \
            Maildir &
        echo -n " qmail-pop"
        ;;
    esac

    case ${qmail_enable} in
[Yy][Ee][Ss])
        # Start qmail
        exec env - PATH="/var/qmail/bin:$PATH" \
            qmail-start ./Maildir splogger qmail &
        echo -n " qmail"
        ;;
    esac
    ;;
stop)
    # Stop the smtp daemon
    smtpid=`ps -axw | grep tcpserver | grep smtp | grep -v grep | awk '{ print $1 }'`
    if [ "$smtpid" != "" ]; then
        kill $smtpid
        echo -n " qmail-smtp"
    fi

    # Stop the pop daemon
    poppid=`ps -axw | grep tcpserver | grep popup | grep -v grep | awk '{ print $1 }'`
    if [ "$poppid" != "" ]; then
        kill $poppid
        echo -n " qmail-pop"
    fi

```

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```
fi

# Stop qmail
qmailpid=`ps -axw | grep qmail-send | grep -v grep | awk '{ print $1 }'`
if [ "$qmailpid" != "" ]; then
    kill $qmailpid
    echo -n " qmail"
fi
;;
*)
    echo "Usage: `basename $0` {start|stop}" >&2
    ;;
esac

exit 0
```

Make the script executable:

```
chmod 750 /var/qmail/rc
```

## 2.9. Set up control files

### 2.9.1. me

```
# echo HOSTNAME.DOMAIN > /var/qmail/control/me
```

### 2.9.2. rcpthosts

```
# echo HOSTNAME.DOMAIN > /var/qmail/control/rcpthosts
# echo DOMAIN >> /var/qmail/control/rcpthosts
```

### 2.9.3. locals

```
# echo HOSTNAME.DOMAIN > /var/qmail/control/locals
# echo DOMAIN >> /var/qmail/control/locals
```

### 2.9.4. defaulthost

```
# echo HOSTNAME > /var/qmail/control/defaulthost
```

### 2.9.5. defaultdomain

```
# echo DOMAIN > /var/qmail/control/defaultdomain
```

### 2.9.6. plusdomain

```
# echo DOMAIN > /var/qmail/control/plusdomain
```

## 2.10. Redirect root's email

**qmail** will not send email directly to `root`. Even if no one else is sending email to `root`, the system is probably sending its daily checks to `root` every night, so the barest minimum **qmail** setup requires an alias for `root`:

```
# echo EMAILADDRESS > /var/qmail/alias/.qmail-root
```

**EMAILADDRESS** is the real address to which you want root's mail sent. Alias files can contain multiple addresses, but each address must be on a separate line.

## 3. Post-installation

### 3.1. Stop sendmail

```
# killall sendmail  
# rm /var/run/sendmail.pid
```

### 3.2. Start qmail

```
# /usr/local/etc/rc.d/qmail.sh start
```

### 3.3. Check qmail and tcpserver are running

```
# ps -ax | grep tcpserver  
# ps -ax | grep qmail
```

## 3.4. Other issues

### 3.4.1. Creating local aliases

**qmail** does not natively support the `/etc/mail/aliases` file, though it can be made to do so with an add-on package. Read `/var/qmail/doc/INSTALL.alias` for details on how **qmail** handles aliases. As a minimum, set up aliases for `root` (done above), `postmaster` and `mailer-daemon`.

## A. Contacting the Author

The author of this document is [Aaron Hill](#). Feel free to send details of any errors in this document by email.

## B. Credits

[Paul Hoadley](#) converted this document from HTML to [DocBook XML](#) and back again.