
Generating MRTG graphs of qmail statistics under FreeBSD

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This document describes how to configure **qmail** to generate separate logs for SMTP, POP3 and local delivery activity, so that Inter7's **qmailmrtg7** package can generate statistics for use with **MRTG**. These instructions have been tested on FreeBSD 4.2R and 4.3R systems, but should work for any system on which the required ports are able to run. The information is claimed only to be sufficient – there are bound to be other ways to do it.

1. Preliminary issues

1.1. Required software

The following software should already be installed:

- **qmail-1.03** (available in `/usr/ports/mail/qmail`)
- **mrtg-2.9.11** (available in `/usr/ports/net/mrtg`)

It is beyond the scope of this document to describe how to install this software, though a related document, [Installing qmail under FreeBSD](#) describes how to install **qmail**.

2. Installing required software

2.1. daemontools-0.70

The `setuidgid` and `multilog` utilities are used from this package.

```
# cd /usr/ports/sysutils/daemontools
# make install
```

2.2. qmailmrtg7-3.1

This open source package is available from [Inter7](#).

```
# cd tmp
# fetch http://inter7.com/qmailmrtg7/qmailmrtg7-3.1.tar.gz
# gunzip qmailmrtg7-3.1.tar.gz
# tar -xvf qmailmrtg7-3.1.tar
# cd qmailmrtg7-3.1
# make all
# make install
# rm /etc/qmail.mrtg.cfg
```

The last step is necessary because **qmailmrtg7**'s Makefile copies the sample configuration file for **MRTG** into `/etc`, whereas it should ideally reside in `/usr/local/etc/mrtg`, or, even more ideally, be appended to your existing **MRTG** config file, probably `/usr/local/etc/mrtg/mrtg.cfg`. This step will be covered in the next section.

3. Creation of the log directories

Create log directories under `/var/log` for each of the daemons:

```
# cd /var/log
# mkdir qmail
# mkdir pop3
# mkdir smtp
```

You should change the default permissions on these directories if you desire more secure logs.

4. Modification of existing configuration files

4.1. `/etc/rc.conf`

These changes will have been made if you have previously set up **qmail** according to [Installing qmail under FreeBSD](#). If not, append the following lines to `/etc/rc.conf`:

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

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4.2. /var/qmail/rc

The startup commands for each of the daemons started in `/var/qmail/rc` need to be altered to take advantage of `multilog`. `HOST.DOMAIN` in the script below should be replaced by the mail server's Fully Qualified Domain Name (FQDN).

```
#!/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
env - PATH="/var/qmail/bin:/usr/local/bin" \
tcpserver -v -H -R -x /etc/tcp.smtp.cdb \
-c200 -u82 -g81 0 25 fixcrio /var/qmail/bin/qmail-smtpd \
2>&1 | /usr/local/bin/setuidgid qmail1 \
/usr/local/bin/multilog t n100 s1000000 /var/log/smtp &

echo -n " qmail-smtp"
;;
esac

case ${qmail_pop_enable} in
[Yy][Ee][Ss])
# Start the qmail pop daemon
env - PATH="/var/qmail/bin:/usr/local/bin" \
tcpserver -v -H -R -c200 0 110 \
/var/qmail/bin/qmail-popup HOST.DOMAIN \
/usr/local/bin/checkpassword /var/qmail/bin/qmail-pop3d \
Maildir 2>&1 | /usr/local/bin/setuidgid qmail1 \
/usr/local/bin/multilog t n100 s1000000 /var/log/pop3 &

echo -n " qmail-pop"
;;
esac

case ${qmail_enable} in
[Yy][Ee][Ss])
# Start qmail
exec env - PATH="/var/qmail/bin:$PATH" \
qmail-start ./Maildir | /usr/local/bin/setuidgid qmail1 \
/usr/local/bin/multilog t n100 s1000000 /var/log/qmail &

echo -n " qmail"
;;
esac
```

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

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

exit 0
```

Lines terminated with a \ can be entered as a single long line, but have been split here to increase readability.

4.3. /usr/local/etc/mrtg/mrtg.cfg

The modification that you make to `mrtg.cfg` will be highly dependent on how you have set up **MRTG** on your system. As a bare minimum, you could append the sample `qmail.mrtg.cfg` to your own `mrtg.cfg`:

```
# cd /usr/local/etc/mrtg
# mv mrtg.cfg mrtg.cfg.bak
# cat mrtg.cfg.bak /tmp/qmailmrtg7-3.1/qmail.mrtg.cfg > mrtg.cfg
```

You should, of course, manually edit the resulting file to ensure that there are no collisions between target names. Additionally, you will need to point to the newly generated HTML pages from your own site's **MRTG** index page.

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Contacting the Author

The author of this document is **Paul Hoadley**. This document only describes what I did to get **qmail** and **MRTG** cooperating on some FreeBSD machines. Your mileage may vary.

Credits

Thanks to **Bill Burrows** for persisting with this, and showing me how to get it going.

The startup script for use in `/usr/local/etc/rc.d/` is only minimally modified from **Aaron Hill**'s excellent script first published in **Installing qmail under FreeBSD**.