

Tom's Sendmail 102 Cheat-Sheet V2003-05-18

Important Sendmail Config File and Directories

Config Files	<code>/etc/aliases</code>	The OS aliases file that connects system accounts to local/non-local accounts. (root, postmaster, etc.)
	<code>/etc/sendmail.cf</code>	The file that sendmail uses (from the mc file) for all of its run time settings. <u>DO NOT EDIT.</u>
	<code>"/mail/sendmail.mc</code>	The main human editable config file that is m4 compiled down to the .cf file. Also found in the /etc/mail directory in newer installs.
	<code>"/mail/</code>	Directory where most sendmail individual settings files reside.
	<code>"/mail/access</code>	The setting file that is used to control email flow to and through your server. Less common since SMTP-Auth has been implemented, but still used for Spam blocking or manual blacklisting people or IP address blocks.
	<code>"/mail/virtusertable</code>	This is the file that gives you control of domain specific aliasing or vhosting email. For example, sending incoming mail for sales@mydomain.com to bob@mydomain.com , or creating catch all email addresses for entire domains.
	<code>"/mail/domaintable</code>	Include a "domain table" which can be used to provide domain name mapping. Use of this should really be limited to your own domains. It may be useful if you change names (e.g., your company changes names from oldname.com to newname.com).
	<code>"/mail/genericstable</code>	This feature will cause certain addresses to be masqueraded or made to appear as another address.
	<code>"/mail/mailertable</code>	Can be used to override routing or provide DNS type routing for specific domains/ports.
Log Files	<code>/var/log/maillog</code>	The mail log file where SMTP, POP, and other run-time related sendmail messages are logged. Look here first when you're having problems working with run-time related errors.
	<code>/var/log/messages</code>	Of course.. looking here for standard service related issues, authentication messages, etc.
User/System Dirs	<code>/var/spool/mail/</code>	Where users email spool files are stored.
	<code>/var/spool/mqueue/</code>	Where queued email is stored

/etc/mail/virtusertable Examples

The virtusertable file is the most common sendmail file that you'll probably edit. The first column in the incoming address or address fragment and the second column is the local or remote intended recipient.

```
[...]
hire-me@mydomain.com          bsmith@mydomain.com

##--Local alias
bob@mydomain.com             bsmith

##--Local Junk mail accounts for Bob
bsmithjunk@mydomain.com     bsmith
bsmithjunk1@mydomain.com    bsmith

##--Local to Remote redirects
billmary@mydomain.com       wsmithok@earthlink.net
bill-n-mary@mydomain.com    wsmithok@earthlink.net
butch-n-mert@mydomain.com   wsmithok@earthlink.net

##--Multi-Domain Conflicting vhost addresses
sales@mydomain.com          bsmith
sales@yourdomain.com        mwalker
sales@homestarrunner.com    strongbad@aol.com

#----Catch All Accounts-----
@mydomain.com               postmaster
```

To rebuild the binary DB file that sendmail uses. Either cd into /etc/mail and type "make", or restart the sendmail service (in Red Hat) with "service sendmail restart".

/etc/aliases Example

```
[...]
# Person who should get root's mail
#root:          marc
root:           admin
postmaster:     root
mailman:        admin
mailman-owner:  mailman

# Shared addresses
webmaster:      admin, mike, mike@yahoo.com
helpdesk:       bob, mike, mike@yahoo.com

## xcssa mailman mail-list
## created: 04-Jun-2001 root
xcssa:          "|/usr/share/mailman/mail/wrapper post xcssa"
xcssa-admin:    "|/usr/share/mailman/mail/wrapper mailowner xcssa"
xcssa-request:  "|/usr/share/mailman/mail/wrapper mailcmd xcssa"
xcssa-owner:    xcssa-admin
```

• Enabling changes made in /etc/aliases

newaliases

OR

sendmail -bi

Changing Sendmail Options

"Well, a pet peeve of mine is people who directly edit the .cf file instead of using the m4 configuration files. Don't do it! [laughs] I treat the .cf file as a binary file – you should too."

-- Eric Allman, author of Sendmail, 18 Oct 1999

- Recompiling the mc -> cf File:

```
# cd /etc/mail
# cp -a sendmail.cf sendmail.cf-BAK
# cp -a sendmail.mc sendmail.mc-BAK
# m4 sendmail.mc > sendmail.cf
```

- Turning on SMTP-Auth (default=plain) in the sendmail.mc file

```
define(`confAUTH_OPTIONS', `A')dnl
```

- Turning on public IP SMTP bindings (for newer sendmail installs/upgrades)

```
dnl This changes sendmail to only listen on the loopback device 127.0.0.1
dnl and not on any other network devices. Comment this out if you want
dnl to accept email over the network.
dnl DAEMON_OPTIONS(`Port=smtp,Addr=127.0.0.1, Name=MTA')
```

Then rebuild the cf file.

- A user's .forward file:

```
# cat /home/bob.forward
bob@yahoo.com
```

When setting up new .forward files, but make sure that the file is set to permissions that do not allow other users to read. Recommend something like "700" settings.

Mail Queue Tips

- Looking at the outgoing mail queue

```
# mailq
```

Commonly used to examine the current outgoing mail queue. It's a a sim link to sendmail binary ran as "sendmail -bp"

Common T-Shooting Tricks-n-Tips

- Check for what IPs Sendmail listing on:

```
# netstat -an|grep 25 |grep tcp
tcp    0    0 0.0.0.0:25      0.0.0.0:*      LISTEN
```

- Check for Sendmail running and accepting connections:

```
# ps auxw|grep [a]ccepting
root   670  0.0  0.8 5628 2072 ?        S    Aug08  0:00 sendmail: accepting connections
```

- Check to see if mail is deliverable:

```
# sendmail -bv root@mydomain.com
root@mydomain.com... deliverable: mailer local, user bob
```

Very useful. This command lets you know if an email address is deliverable locally or remotely and will properly use /etc/aliases and virtusertable mappings.

- Watch the mail log as you're sending/testing mail:

```
# tail -f /var/log/maillog
```

- Telnet T-Shooting Example:

```
# telnet localhost 25
Trying 127.0.0.1...
Connected to localhost.
Escape character is '^]'.
220 playground.test.mydomain.com ESMTP Sendmail 8.11.6/8.11.6; Tue, 10 Sep 2002 14:11:41
-0500
ehlo mydomain.com <----- Initial Handshake & Option Listing
250-playground.test.mydomain.com Hello localhost [127.0.0.1], pleased to meet you
250-ENHANCEDSTATUSCODES
250-8BITMIME
250-SIZE
250-DSN
250-ONEX
250-ETRN
250-XUSR
250-AUTH LOGIN PLAIN <----- Types of SMTP-Auth
250 HELP
mail from:tweaks@mydomain.com <----- Email "From"
250 2.1.0 tweaks@mydomain.com... Sender ok
rcpt to:tweaks@mydomain.com <----- Email "To"
250 2.1.5 tweaks@mydomain.com... Recipient ok
data <----- Go into "data mode"
354 Enter mail, end with "." on a line by itself
SUBJECT: This is a test from Playground

This is a test..

Tweaks
. <----- Terminating "."
250 2.0.0 g8AJBu004136 Message accepted for delivery
quit <-----
221 2.0.0 playground.test.mydomain.com closing connection
Connection closed by foreign host.
```

- Testing Sendmail's queues

```
# sendmail -v -q
```

This does a verbose parsing of the current queue - useful in trying to figure out problems when theres 100's or 1000's of emails queued up..normally either DNS or 3rd party server rejectign connections...though can also be used to help track down deeper issues locally on a system (such as with procmail or vacation).

- Listing Sendmail Compile and Config Settings

```
# sendmail -vd0.015 < /dev/null
```

this gives a LOT of verbose information about the sendmail on the system - its hostname, compile options, filter rulesets etc

- Verify the Sendmail is using smrsh:

```
# cat /etc/sendmail.cf |grep smrsh
##### $Id: smrsh.m4,v 8.14 1999/11/18 05:06:23 ca Exp $ #####
Mprog,      P=/usr/sbin/smrsh, F=lsDFMoqeu9, S=EnvFromL/HdrFromL, R=EnvToL/HdrToL,
D=$z:/,     A=smrsh -c $u
```

- Verify that smrsh is using /etc/smrsh config file

```
# strings /usr/sbin/smrsh | grep ^/
/lib/ld-linux.so.2
/etc/smrsh      <-----line your looking for.
/bin:/usr/bin:
/bin/sh
```

Other Email Related Resources:

Email Terms Explained: <http://www.sendmail.org/email-explained.html>

Sendmail FAQ: <http://www.sendmail.org/faq>

Example Access File: <http://www.srkconsulting.com/access>

Virtusertable: <http://www.sendmail.org/virtual-hosting.html>

Other Examples: <http://www.rhce2b.com/clublinux/RHCE-17.shtml>

Sendmail.mc FAQ: <http://www.sendmail.org/m4/readme.html>