Building, Installing and Configuring sendmail

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Abstract

- So you've finally got your Linux box up and running and now you're ready to set it up to do e-mail. What should you do now? Should you just turn on the sendmail system which came with it? What problems should you expect, and what should you do about them?
The Speaker

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Everybody has lawyers:

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What is sendmail

“Sendmail started out being a sledgehammer used to kill a fly, only to discover that the fly was actually an elephant in the distance.”

Eric Allman, the developer of sendmail
Introduction

- Who am I?
- What makes me qualified to talk about this subject?
  - 25 Years working with computers
  - 10 Years experience with Unix
  - Unix Security Administrator
MTA vs MUA

- Mail Transfer Agent
  - sendmail
  - lmail
  - qmail
  - zmail
  - exchange
  - domino

- Mail User Agent
  - Local Agents
    - Pine
    - Elm
  - Remote Agents
    - IMAP
    - POP
History of sendmail

- 1980 – Eric Allman – UC Berkeley
  - Initial sendmail program – a re-write of his delivermail program
  - First sendmail was shipped with 4.1c BSD (the first version of Berkeley UNIX to be shipped with TCP/IP)
  - Eric has continued to support and enhance sendmail
History of sendmail

- 1987 – Lennart Lovestrand – University of Linköping, Sweden – IDA sendmail
  - First non-Allman version of sendmail
  - IDA – Institutionen för Datavetenskap
  - Contained support for dbm files
History of sendmail

- 1990 – Neil Rickert (NIU) and Paul Pomes (UIUC) – UIUC I DA sendmail
  - A continuation of the work of Lennart Lovstrand
  - Configuration file fixes and use of the current m4-based form for writing configuration files
  - Very successful and highly portable version
History of sendmail

- 1990 – Paul Vixie – Digital equipment company – KJS (King James sendmail)
  - Conservative outgrowth of Lennart Lovestrand’s last IDA release
  - Focus was on code improvement
- Other Vendors have made updates
  - Sun
  - Hewlett Packard
History of sendmail

- 1994 Eric Allman – sendmail V8.7
- 1996 Eric Allman – sendmail v8.8
- 1998 Eric Allman – sendmail v8.9
- 2000 Eric Allman – sendmail v8.11
- 2002 Eric Allman – sendmail v8.12.2
- Version numbers usually displayed as 8.9.3/8.9.3
History of sendmail

- www.sendmail.com
  - sendmail Advanced Message Server
    - Mail hosting
  - sendmail Multi-Switch
    - Commercial network routing
  - sendmail Mobile Message Server
    - Web/wireless access
History of sendmail

- [www.sendmail.org](http://www.sendmail.org)
  - Current release – 8.12.2 (as of 1/13/02)
  - Recent history
    - 8.10.0 – 3/1/00
    - 8.11.0 – 7/19/00
  - Current beta – No current beta
    - If you’re going to run beta code, you MUST stay current!!!
Where do I get it?

- Source
  - www.sendmail.org

- RPM’s
  - On the RedHat 6.2 CDROM
    - /RedHat/RPMS/sendmail-8.9.3-15.i386.rpm
    - /RedHat/RPMS/ sendmail-cf-8.9.3-15.i386.rpm
    - /RedHat/RPMS/ sendmail-docs-8.9.3-15.i386.rpm
Where do I get it?

- RPM’s
  - On the RedHat 7.1 CDROM
    - /RedHat/RPMS/sendmail-8.11.2-14.i386.rpm
    - /RedHat/RPMS/sendmail-cf-8.11.2-14.i386.rpm
    - /RedHat/RPMS/sendmail-docs-8.11.2-14.i386.rpm
Where do I get it?

- RPM’s
  - On the RedHat 7.2 CDROM
    - /RedHat/RPMS/sendmail-8.11.6-3.i386.rpm
    - /RedHat/RPMS/sendmail-cf-8.11.6-3.i386.rpm
    - /RedHat/RPMS/sendmail-docs-8.11.6-3.i386.rpm

- This is the latest version of sendmail 8.11
Where do I get it?

- We are going to install sendmail 8.12
- We will get it from sendmail.org
First, a few gotcha’s

- There is a bug in all Linux kernels prior to version 2.2.16. If you are running an older kernel, you **MUST** upgrade!
- RedHat Linux version 7 has moved the default location of the “man” pages.
- With at least sendmail 8.11, different parts of the sendmail system expect to find sendmail.cf in different locations.
Building sendmail

- Download the file from sendmail.org
- Uncompress and untar the file
  - `tar -zxf sendmail-8.12.2.tar.gz`
- Change to the local configuration directory
  - `cd sendmail-8.12.2/devtools/Site`
- Create a site configuration file
Building sendmail

- As an example of how to add support to sendmail, we will be adding support for SASL to our sendmail implementation.

- Cyrus-SASL, installed as a part of linux, is an implementation of RFC 2222 SASL (Simple Authentication and Security Layer), a method for adding authentication support to connection based protocols.
Building sendmail

- From the sendmail root directory edit the file “devtools/Site/site.config.m4” and put in the following contents:

```
APPENDDEF(`conf_sendmail_ENVDEF', `-DSASL')
APPENDDEF(`conf_sendmail_LIBS', `-lsasl')
```
Building sendmail

- Download the file from sendmail.org
- Uncompress and untar the file
  - `tar -zxf sendmail-8.12.2.tar.gz`
- Change to the sendmail directory
  - `cd sendmail-8.12.2`
- Build sendmail
  - `sh Build`
Building sendmail

- Become the superuser
  - su -
- Create the new userid and group used by sendmail 8.12.2
  - groupadd -g 25 -r smmsp
  - useradd -u 25 -r -g smmsp smmsp
Installing sendmail

- Backup the old files
  - `cd /usr/sbin`
  - `cp -p sendmail sendmail.old`
  - `cd /etc`
  - `cp -p sendmail.cf sendmail.cf.old`

- Fix a redhat problem
  - `ln -s /usr/share/man /usr/man`
Installing sendmail

- Change to the directory where built
  - cd ~/harold/sendmail-8.12.2
- Change to the sendmail subdirectory
  - cd sendmail
- Install the sendmail binary
  - ./Build install
Installing sendmail

- Install the sendmail configuration file
  - cd ../cf/cf
  - cp generic-linux.cf /etc/mail/sendmail.cf
- Create additional config files
  - /etc/mail/local-host-names
- Test sendmail to see if it can start
  - /usr/sbin/sendmail -bd -q1h
Configuration

- Linuxconf
  - No!
  - It’s always a few releases behind
    - Rules are based upon sendmail 8.8.7
  - It will re-write sendmail.cf on boot if it thinks it has been changed
  - Uninstall the mailconf module of linuxconf
Configuration

- Manual editing of the configuration files
  - M4 configuration files
    - These are the one’s to edit
    - Rebuild with M4 and replace the resulting .cf
  - Other configuration files
    - Don’t edit sendmail.cf directly
    - Do edit the other files
      - /etc/mail/aliases
      - /etc/mail/access
      - And so forth
Configuration Files

- /etc/sendmail.cf
  - Cw line vs /etc/mail/sendmail.cw vs /etc/mail/local-host-names
- /etc/aliases
  - Moved to /etc/mail/aliases
  - Make sure a human reads root’s mail
Relay Control

- Why?
- Spam is bad!
- Spam will make you unpopular!
- Spam will get your system added to various databases which are used to block access from your system!
- Spam is bad!
Relay Control

- **How**
  - Run a current release
  - `/etc/mail/access`
    - `dev.uga.edu` RELAY
    - `ucns.uga.edu` RELAY
    - `192.168.1` RELAY
    - `rock.peachnet.edu` RELAY
    - `share.org` RELAY
    - `spammer.org` DENY
Relay Control

- Add the following line to the sendmail.mc file and rebuild sendmail.cf

…
OSTYPE(linux)dnl
DOMAIN(generic)dnl
FEATURE(access_db)dnl
MAILER(local)dnl
MAILER(smtp)dnl
Relay Control

- How (Cont.)
  - `/etc/mail/access.db`
    - `makemap hash access < access`

- Testing
  - [http://www.abuse.net/relay.html](http://www.abuse.net/relay.html)
    - Enter the IP address to be tested
    - Leave other boxes empty
    - Click on “test for relay”
Starting sendmail by hand

- `/usr/sbin/sendmail -bd -q1h`
- `/etc/rc.d/init.d/sendmail start`
Starting sendmail at system startup

- Actual startup file
  - /etc/rc.d/init.d/sendmail
References

Sendmail, Second Edition
Bryan Costales
Eric Allman
O’Reilly & Associates
ISBN: 1-56592-222-0
References

- http://www.sendmail.org

- LINUX HOWTO documents
  - Should be on your Install CD, or from http://metalab.unc.edu/LDP/

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Th-th-th-th-that’s all folks

- Questions?