

Building, Installing and Configuring sendmail

SHARE 98

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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

Harold Pritchett

The University of Georgia

(706) 542-0190

harold@uga.edu



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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
- Imail
- 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 Lovstrand – 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 IDA 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 Lovestrands 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
 - 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 CDRROM
 - /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>
 - 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`

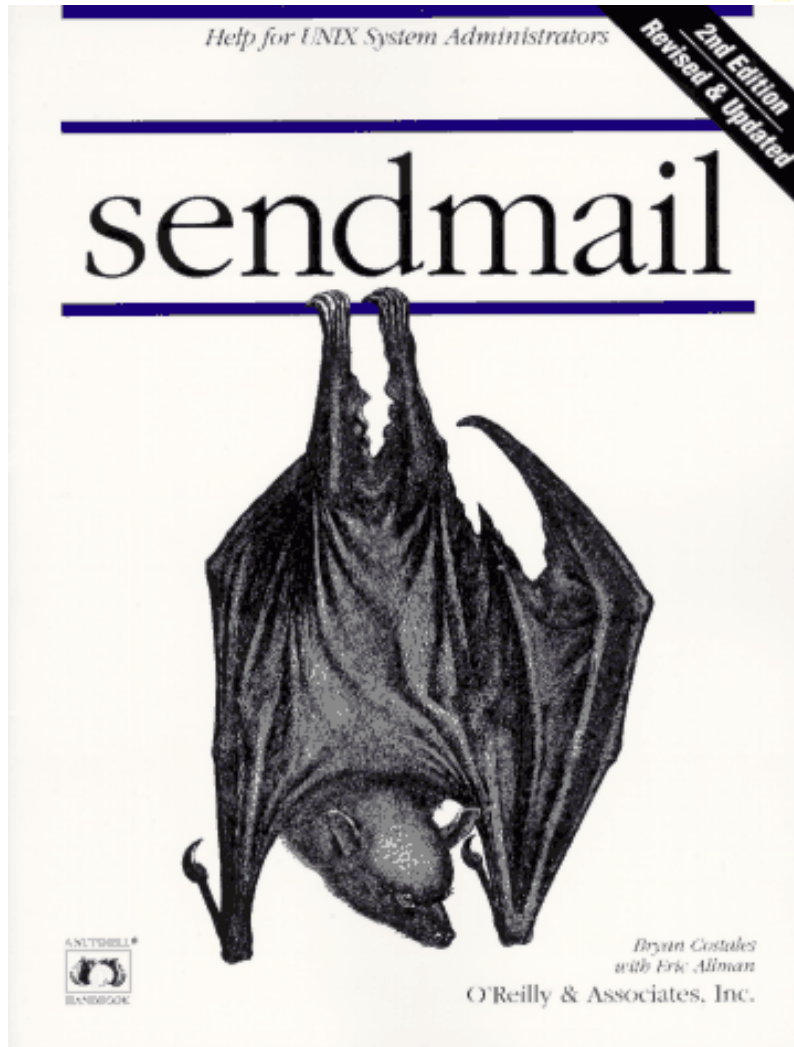


Starting sendmail at system startup

- 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/>
- <http://www.nhcc.com/sendmail.html>



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Th-th-th-that's all folks

- Questions?

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