Internet E-mail and SMTP Server (Sendmail)

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Internet E-mail

- Protocol
  - SMTP (Simple Mail Transport Protocol)
  - POP (Post Office Protocol)
  - IMAP (Internet Message Access Protocol)
  - MIME (Multi-Purpose Internet Mail Extensions)
- Protocol (Not Internet)
  - X.400
  - Lotus CC Mail
  - MS.Exchange

Internet E-mail

- Program
  - Mail User Agent (MUA) such as Eudora, Netscape Mail, Microsoft Outlook, PINE
  - Mail Transport Agent (MTA) such as Sendmail, Smail, (MS.Exchange, Lotus Notes E-mail Server)
  - Mail Read Server: POP/IMAP Server??

Internet E-mail

- How the mail deliver to you?
  - Users use MUA to send an E-mail to the SMTP Server
  - SMTP Server looks up for recipient DNS host Address and DNS MX Record
  - SMTP Server delivers the E-mail to the appropriate destination SMTP Server
  - Destination SMTP Server delivers E-mail to users mail box.
  - Users use MUA to read the E-mail via POP/IMAP protocol

Mail User Agent

- Outgoing E-mail Server = SMTP Server
- Incoming E-mail Server = POP/IMAP Server
- Fancy features: Support POP, IMAP (remote mailbox), MIME, 7bit/8bit, Digital Signature (PGP, X.509)
- Graphics User Interface: Netscape, Eudora, M$ Outlook
- Text mode: PINE (incredibly fast!)
- WWW Interface: Hotmail, Rocketmail, Yahoo Mail

Mail Transport Agent

- Purpose
  - Forward E-mail to the appropriate destination SMTP Server.
  - Deliver E-mail to local users mailbox.
  - Special Processing: Header Modification, Masquerading domain, Blocking Spams, Virtual domain.
- Normally listen to port 25 (SMTP)

Tools

- Host, nslookup to check DNS
- Direct telnet to port 25 (SMTP)
- Direct telnet to port 109/110 (POP)
- mtest client program to test IMAP
- Sendmail Test mode (sendmail -bt)

Sendmail

- One of the most popular SMTP Server in the world
- Has the the most complex configuration file! :)
- Robust, Feature-rich, the most Powerful?
- Get update to the security patch!

Sendmail

- It should be already installed in every Linux distribution
- To install it yourself, http://www.sendmail.org, ftp://ftp.sendmail.org
- Extract and cd src ; ./Build, ./Build install
- **Binary:** /usr/sbin/sendmail, /usr/sbin/newaliases, /usr/sbin/mailq
- **Configuration Files:** /etc/sendmail.cf, /etc/aliases and could be more.
- **Spool Directory:** /var/spool/mqueue

Simple configurations

- /etc/aliases, after modify, run “/usr/sbin/newaliases”
- /etc/sendmail.cf
  - O PrivacyOptions=goaway

Anti-Spam Feature

- Being “mail relay” server, Control the IP and domain of users that can use our server as mail relay (SMTP) server to protect spams.
  - It is ok if they are trying to send a mail to our users.
  - If not, check the domain name and IP address if they are in the list?
- Block the Mail from well-known Spam server.
- Senders must have resolvable domain names.
- (All features are available as default in Sendmail 8.9)

Custom configuration

- Edit /etc/sendmail.cf
- Use M4 Macro language to generate your custom sendmail.cf from custom .mc files.
- สร้าง linux.mc ไฟล์โดยดูจากตัวอย่างใน sendmail-8.9.1/cf/cf/tcpproto.mc ใส่ FEATURE ตามต้องการ
- m4 ../m4/cf.m4 linux.mc > sendmail.cf