



## 22

### 22.1

email

가

FreeBSD

FreeBSD

;

가

B

:

•

가

•

**sendmail**

FreeBSD

가

•

•

가

•

**sendmail**

가

•

•

UUCP SMTP

가

•

가

•

-

가

•

SMTP

가

•

**mutt**

(Mail User

Agent)

가

- POP IMAP 가

- 

∴

- (24 ).

- DNS (24 ).

- (4 )

## 22.2

5 가 가 , ,  
DNS,

### 22.2.1

mutt, pine, elm mail balsa,  
xfmail GUI WWW  
TCP email  
"mailhost"

### 22.2.2

FreeBSD sendmail  
:

- exim;
- postfix;

- qmail

가 .  
POP IMAP  
mbox Maildir . 가  
:  
가 **sendmail** 가 .  
FreeBSD MTA .

### 22.2.3 Email DNS

(DNS) named

DNS  
DNS IP MX  
MX( )  
MX A  
IP  
host(1) MX :

% **host -t mx FreeBSD.org**

FreeBSD.org mail is handled (pri=10) by mx1.FreeBSD.org

### 22.2.4

가 .  
mbox( ) Maildir  
mail(1) **mutt**  
POP IMAP 가 .  
POP IMAP 가 .

## 22.2.4.1 POP IMAP

가 POP IMAP . POP IMAP 가  
가 : IMAP

- IMAP 가 .
- IMAP .
- IMAP 가 가

POP IMAP :  
IMAP POP . POP IMAP  
가 :

- `qpopper;`
- `teapop;`
- `imap-uw;`
- `courier-imap;`

POP IMAP .  
POP IMAP /etc/inetd.conf .  
: POP IMAP 가  
ssh(1) .  
14.12.7 .

## 22.2.4.2

가 MUA  
mutt mail(1)

## 22.2.5

## 22.3 sendmail

sendmail(8) FreeBSD (MTA) . **sendmail**  
(MUA)  
**sendmail**

**sendmail** :

/etc/mail/access	<b>sendmail</b>
/etc/mail/aliases	(alias)
/etc/mail/local-host-name	<b>sendmail</b>
/etc/mail/mailer.conf	
/etc/mail/mailertable	
/etc/mail/sendmail.cf	<b>sendmail</b>
/etc/mail/virtusertable	가

### 22.3.1 /etc/mail/access

IP 가  
*OK, REJECT, RELAY*  
**sendmail**  
*OK* 가

. REJECT

. RELAY

가

22-1. sendmail

cyberspammer.com	550 We don't accept mail from spammers
FREE.STEALTH.MAILER@	550 We don't accept mail from spammers
another.source.of.spam	REJECT
okay.cyberspammer.com	OK
128.32	RELAY

5 가

sendmail

가

(another.source.of.spam)

cyberspammer.com

okay.cyberspammer.com

128.32. IP

/etc/mail/ make

### 22.3.2 /etc/mail/aliases

가 , , 가  
가 . /etc/mail/aliases 가 .

22-2.

root: localuser
ftp - bugs: joe,eric,paul
bit.bucket: /dev/null
procmail: " /usr/local/bin/procmail"

; (:)  
root localuser

```

                                localuser
ftp - bugs   가   3
joe, eric   paul   user@example.com
                                /dev/null
                                /usr/local/bin/procmail
                                /etc/mail/   make

```

### 22.3.3 /etc/mail/local - host - names

```

sendmail(8)
sendmail   가
example.com   mail.example.com   local - host -
names   :

```

```

example.com
mail.example.com

```

sendmail(8)

### 22.3.4 /etc/mail/sendmail.cf

```

sendmail   sendmail.cf
                                sendmail
sendmail   sendmail   m4(1)
                                /usr/sr/ccontrib/sendmail/cf/README
                                sendmail

```



## 22.3.5 /etc/mail/virtusertable

virtusertable 가 , /etc/mail/aliases

### 22-3. 가

root@example.com	root
postmaster@example.com	postmaster@noc.example.net
@example.com	joe

example.com  
( )  
root@example.com root  
postmaster@example.com noc.example.net postmaster  
example.com 가  
joe

## 22.4

FreeBSD MTA ( ) **sendmail**  
**sendmail**

가 MTA  
MTA  
FreeBSD MTA

### 22.4.1 MTA

MTA 가 MTA FreeBSD  
MTA

FreeBSD

MTA

**sendmail**

MTA 가

가

/usr/bin/sendmail

가

MTA

## 22.4.2 sendmail

sendmail

4.5-

4.6-

### 22.4.2.1 2002/4/4

### FreeBSD 4.5 - STABLE

(4.5-

)

/etc/rc.conf

```
sendmail_enable="NO"
```

sendmail

/etc/mail/mailer.conf 가(

)

e-mail

sendmail

### 22.4.2.2 2002/4/4

### FreeBSD 4.5 - STABLE (4.6-

)

sendmail

/etc/rc.conf

```
sendmail_enable="NONE"
```

```

: sendmail
.
periodic(8)
sendmail
가 . sendmail
sendmail
sendmail
sendmail

sendmail /etc/rc.conf
```

```
sendmail_enable="NO"
```

```
sendmail rc.sendmail(8)
```

### 22.4.3. MTA

MTA 가  
FreeBSD

#### 22.4.3.1 2002/4/11 FreeBSD 4.5-STABLE(4.5-

).

```
/usr/local/etc/rc.d/ root .sh 가
start stop
```

```
# /usr/local/etc/rc.d/supermailer.sh start
```

```
stop
```

```
# /usr/local/etc/rc.d/supermailer.sh stop
```

22.4.3.2 2002/4/11

FreeBSD 4.5 - STABLE (4.6 -

)

FreeBSD /etc/rc.conf  
mta\_start\_script="filename" . filename MTA

## 22.4.4 sendmail

sendmail

sendmail 가 .  
MTA sendmail ;  
sendmail .  
/usr/bin/sendmail sendmail  
가 .  
FreeBSD mailwrapper(8)

sendmail /etc/mail/mailer.conf  
:

sendmail	/usr/libexec/sendmail/sendmail
send - mail	/usr/libexec/sendmail/sendmail
mailq	/usr/libexec/sendmail/sendmail
newaliases	/usr/libexec/sendmail/sendmail
hoststat	/usr/libexec/sendmail/sendmail
purgestat	/usr/libexec/sendmail/sendmail

(sendmail ) mailer.conf  
/usr/libexec/sendmail/sendmail sendmail  
mailwrapper sendmail  
sendmail /usr/local/supermailer/bin/sendmail - compat

/etc/mail/mailer.conf :

```

sendmail /usr/local/supermailer/bin/sendmail - compat
send - mail /usr/local/supermailer/bin/sendmail - compat
mailq /usr/local/supermailer/bin/mailq - compat
newaliases /usr/local/supermailer/bin/newaliases - compat
hoststat /usr/local/supermailer/bin/hoststat - compat
purgestat /usr/local/supermailer/bin/purgestat - compat
    
```

## 22.4.5

### sendmail

MTA

## 22.5

### 22.5.1

### hosts

### FQDN

### 가?

```

가
foo.bar.edu bar.edu mumble mumble
mumble.bar.edu
BSD BIND (resolver) FreeBSD
BIND
mumble mumble.foo.bar.edu
root
mumble.bar.edu mumble.edu
가 RFC 1535
    
```

/etc/resolv.conf

domain foo.bar.edu

search foo.bar.edu bar.edu

RFC 1535 가 “local public”  
가

## 22.5.2 sendmail “mail loops back to myself”

sendmail FAQ :

553 MX list for domain.net points back to relay.domain.net

554 <user@domain.net>... Local configuration error

가?

MX ( relay.domain.net)  
domain.net . domain.net /etc/mail/local-  
host-names 가 (8.10 /etc/sendmail.cw ) “Cw  
domain.net”(FEATURE(use\_cw\_file) ) /etc/mail/sendmail.cf 가 .

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

FAQ

## 22.5.3 - PPP

가?

```

LAN FreeBSD . FreeBSD LAN
가 . PPP
가 UUCP
2 MX Full-time( )
가 . example.com 가
2 MX example.net
(example.com /etc/mail/sendmail.cf Cw example.com
가 ):

```

example.com.	MX	10	example.com.
	MX	20	example.net.

```

sendmail (example.com)
. sendmail
2 MX
(example.net) . 2 MX 1 MX
(example.com)
:

```

```

#!/bin/sh
# Put me in /usr/local/bin/pppmyisp
( sleep 60 ; /usr/sbin/sendmail -q ) &
/usr/sbin/ppp -direct pppmyisp

```

```

sendmail -
qRexample.com . example.com
:

```

FreeBSD 가 .

```
> 2 MX . 1 MX 가
>
> 30 . 1 MX
> 30
>
> 가? root
>
sendmail.cf "privacy flags" Opgoaway,restrictqrun 가
root 가 가 restrictqrun
MX
MX
# 가 MX
#
OwTrue
"hostname.customer.com" 가 DNS A "customer.com"
"customer.com"
```

## 22.5.4

## “Relaying

### Denied”

### 가?

FreeBSD 가

sendmail sendmail  
POP3 가

“5.7 Relaying Denied”

가 가  
/etc/mail/relay-domains ISP IP . IP 가



```
# echo "your.isp.example.com" > /etc/mail/relay-domains
```

sendmail

ISP

/

가

가

가

```
your.isp.example.com
other.isp.example.net
users - isp.example.org
www.example.org
```

( 가 가 )

가 . SPAM

가

## 22.6

### 22.6.1

/etc/resolv.conf

가 FreeBSD :

MTA( : sendmail)

- FreeBSD.org

- DNS

IP 가 ( PPP - 가 ).

SMTP

가 가 :

- DNS MX IP

- MX 가 DNS

가 가

:

**# hostname**

example.FreeBSD.org

**# host example.FreeBSD.org**

example.FreeBSD.org has address 204.216.27.XX

[<yourlogin@example.FreeBSD.org>](mailto:yourlogin@example.FreeBSD.org)

(**sendmail** example.FreeBSD.org

가 ).

(example.FreeBSD.org)

hub :

**# host example.FreeBSD.org**

example.FreeBSD.org has address 204.216.27.XX

example.FreeBSD.org mail is handled (pri=10) by hub.FreeBSD.org

DNS

DNS

*Mail*

*eXchage* . MX 가 IP

freefall.FreeBSD.org MX :

freefall	MX	30	mail.crl.net
freefall	MX	40	agora.rdrop.com
freefall	MX	10	freefall.FreeBSD.org
freefall	MX	20	who.cdrom.com

freefall MX 가 . 가 MX 가  
 ( "backup  
 MX" )가  
 가  
 MX  
 . ISP .

## 22.6.2

" ( : )  
 ( .  
 \*.FreeBSD.org)  
 .  
*username* . adduser(8)  
 .  
 . DNS :

example.FreeBSD.org	A	204.216.27.XX	; Workstation
	MX	10 hub.FreeBSD.org	; Mailhost

A 가  
 . MX .  
 DNS . DNS  
 DNS DNS ISP .

가 .  
customer1.org 가 customer1.org  
mail.myhost.com . DNS  
:

customer1.org	MX	10	mail.myhost.com
---------------	----	----	-----------------

customer1.org A .

**Note:** A 가 customer1.org ping 가 .

**sendmail**

. 가 :

- FEATURE(use\_cw\_file) /etc/mail/local-host-names  
가 . 8.10 **sendmail**  
/etc/sendmail.cw .
- 8.10 **sendmail** /etc/sendmail.cf  
/etc/mail/sendmail.cf Cwyour.host.com 가 .

## 22.7 UUCP SMTP

FreeBSD **sendmail**  
. UUCP(UNIX-to-UNIX Copy Protocol )  
**sendmail** .

/etc/mail/sendmail.cf 가 . **sendmail** 8  
m4(1) . m4(1)  
/usr/src/usr.sbin/sendmail/cf .

**sendmail** .  
CDROM FreeBSD 가 가 :

```
# cd /cdrom/src
# cat scontrib.?? | tar xzf - -C /usr/src/contrib/sendmail

        . cf          README          m4
        .
UUCP          가          mailertable
sendmail    ( )
        .mc          /usr/src/usr.sbin/sendmail/cf/cf          가
        . foo.mc          sendmail.cf
        :
```

```
# cd /usr/src/usr.sbin/sendmail/cf/cf
# make foo.cf
# cp foo.cf /etc/mail/sendmail.cf

        .mc          :
```

```
VERSIONID(' Your version number') OSTYPE(bsd4.4)

FEATURE(accept_unresolvable_domains)
FEATURE(nocanonify)
FEATURE(mailertable, `hash -o /etc/mail/mailertable')

define(`UUCP_RELAY', your.uucp.relay)
define(`UUCP_MAX_SIZE', 200000)
define(`confDONT_PROBE_INTERFACES')
```

```
MAILER(local)
MAILER(smtp)
MAILER(uucp)

Cw your.alias.host.name
Cw youruucpnodename.UUCP
```

```
accept_unresolvable_domains, nocanonify    confDONT_PROBE_INTERFACES
DNS . UUCP_RELAY UUCP
.UUCP 가 UUCP_RELAY
; ISP
/etc/mail/mailertable
가 :
```

```
#
# makemap hash /etc/mail/mailertable.db < /etc/mail/mailertable
.uucp - dom:your.uucp.relay
```

:

```
#
# makemap hash /etc/mail/mailertable.db < /etc/mail/mailertable
#
horus.interface-business.de uucp-dom:horus
.interface-business.de uucp-dom:if-bus
interface-business.de uucp-dom:if-bus
.heep.sax.de smtp8:%1
horus.UUCP uucp-dom:horus
if-bus.UUCP uucp-dom:if-bus
.uucp-dom:
```

```
3 가
UUCP SMTP
.UUCP uucp-neighbor !recipient 가
.UUCP 가
(.) 가
UUCP . uucp-dom: uuname
UUCP
DBM
mailertable . mailertable
```

```

:                               sendmail  -bt
.                               ;
.                               sendmail
.                               3,0
.                               .
.                               (           )
.                               .

Ctrl+D

% sendmail -bt
ADDRESS TEST MODE (ruleset 3 NOT automatically invoked)
Enter <ruleset> <address>
> 3,0 foo@example.com
canonify           input: foo @ example . com
...
parse             returns: $# uucp-dom $@ your.uucp.relay $: foo < @ example . com .
>
> ^D

```

## 22.8

- 가 가 . 가 :
- 가 send-pr(1)  
ISP .
  - 가  
MTA 가 . MTA  
offloading . **sendmail postfix**  
가 “ ”

가 mail/ssmtp . root

:

```
# cd /usr/ports/mail/ssmtp
# make install replace clean
```

```
mail/ssmtp /usr/local/etc/ssmtp/ssmtp.conf 4
:
```

```
root=yourrealemail@example.com
mailhub=mail.example.com
rewriteDomain=example.com
hostname=_HOSTNAME_
```

```
root . mail.example.com ( ISP " "
"SMTP" ) ISP .
```

```
/etc/rc.conf sendmail_enable="NONE" sendmail .
```

```
mail/ssmtp . /usr/local/etc/ssmtp
ssmtp .
```

```
ssmtp ISP
가 .
```

## 22.8

IP 가 가 .

**sendmail**

```
IP 가 PPP ISP
가 . ISP example.net,
user bsd.home 가 ISP
```



```

relay.example.net .
                가          가          . fetchmail
                .
                (mail/fetchmail) . ISP      POP3 .
PPP            /etc/ppp/ppp.linkup
가            :
```

```

MYADDR:
!bg su user -c fetchmail
```

```

                sendmail      (      )
                sendmail
                /etc/ppp/ppp.linkup  fetchmail      :
```

```

!bg su user -c "sendmail -q"
```

```

bsd.home  user      가          가          . bsd.home  user
                .fetchmailrc      :
```

```

poll example.net protocol pop3 fetchall pass MySecret
```

```

                MySecret      user      .
from:                sendmail  user@bsd.home  user@example.net
                .
                sendmail
relay.example.net .
                .mc      :
```

```

VERSIONID('bsd.home.mc version 1.0')
OSTYPE(bsd4.4)dnl
FEATURE(nouucp)dnl
MAILER(local)dnl
MAILER(smtp)dnl
```

```
Cwlocalhost
Cwbsd.home
MASQUERADE_AS(`example.net')dnl
FEATURE(allmasquerade)dnl
FEATURE(masquerade_envelope)dnl
FEATURE(nocanonify)dnl
FEATURE(nodns)dnl
define(`SMART_HOST', `relay.example.net')
Dmbsd.home
define(`confDOMAIN_NAME', `bsd.home')dnl
define(`confDELIVERY_MODE', `deferred')dnl
```

```
.mc      sendmail.cf
sendmail.cf      sendmail
```

## 22.10 SMTP

```
SMTP      SMTP      sendmail
가
```

```
security/cyrus - sasl      . security/cyrus - sasl
                             pwcheck
security/cyrus - sasl      /usr/local/lib/sasl/Sendmail.conf (
)      가      :
```

```
pwcheck_method: passwd
```

```
sendmail      FreeBSD passwd
SMTP
```

```
/etc/make.conf      가      :
```

```
SENDMAIL_CFLAGS=-I/usr/local/include/sasl1 -DSASL
SENDMAIL_LDFLAGS=-L/usr/local/lib
SENDMAIL_LDADD=-lsasl
```

```

                                cyrus - sasl                sendmail
. sendmail                                cyrus - sasl

.
.
                                sendmail                :

# cd /usr/src/usr.sbin/sendmail
# make cleandir
# make obj
# make
# make install

/usr/src
sendmail                                가 .

sendmail                                /etc/mail/freebsd.mc
( .mc .
hostname(1) .mc ) 가 :
```

```
dnl set SASL options
TRUST_AUTH_MECH('GSSAPI DIGEST-MD5 CRAM-MD5 LOGIN')dnl
define('confAUTH_MECHANISMS', `GSSAPI DIGEST-MD5 CRAM-MD5 LOGIN')dnl
define('confDEF_AUTH_INFO', `/etc/mail/auth-info')dnl
```

```

                                sendmail                . pwcheck 가
.
.
                                /etc/mail    make(1)                . .mc
freebsd.cf .cf ( .mc
). sendmail.cf                sendmail                make
```

```
install restart .
/etc/mail/Makefile .
```

```
. 가 sendmail LogLevel 13
/var/log/maillog 가 .
/etc/rc.conf 가
:
```

```
sasl_pwcheck_enable="YES"
sasl_pwcheck_program="/usr/local/sbin/pwcheck"
```

```
SMTP_AUTH .
SMTP sendmail .
```

## 22.11

```
(MUA) . 가
MUA ;
. FreeBSD
가 . evolution balsa
; mutt, pine mail ;
```

### 22.11.1 mail

```
mail(1) FreeBSD . 가
```

```
MUA .
```

```
mail POP IMAP
```

(22.12 ) fetchmail

mbox

mail :

% mail

/var/mail mail 가 . 가

가

가 :

Mail version 8.1 6/6/93. Type ? for help.

"/var/mail/marcs": 3 messages 3 new

>N	1	root@localhost	Mon Mar	8 14:05	14/510	"test"
N	2	root@localhost	Mon Mar	8 14:05	14/509	"user account"
N	3	root@localhost	Mon Mar	8 14:05	14/509	"sample"

mail t

:

& t 1

Message 1:

From root@localhost Mon Mar 8 14:05:52 2004

X-Original-To: marcs@localhost

Delivered-To: marcs@localhost

To: marcs@localhost

Subject: test

Date: Mon, 8 Mar 2004 14:05:52 +0200 (SAST)

From: root@localhost (Charlie Root)

This is a test message, please reply if you receive it.

t 가

h

R r mail . R  
r

(.) 가 :

& R 1

To: root@localhost

Subject: Re: test

Thank you, I did get your email.

EOT

m

(.)

(.)

& mail root@localhost

Subject: I mastered mail

Now I can send and receive email using mail ... :)

EOT

mail ? . mail(1)

mail

Note: mail(1)

. mutt MUA

mail [converters/mpak](#)

## 22.11.2 mutt

mutt 가 :

- ;
- PGP ;
- MIME ;
- Maildir ;
- .

mutt 가 . mutt

<http://www.mutt.org>

mutt mail/mutt mail/mutt-devel

mutt :

% mutt

mutt /var/mail

mutt

mutt 가

```
q:Quit d:Del u:Undel s:Save m:Mail r:Reply g:Group ?:Help
 1 N Mar 09 Super-User ( 1) test
 2 N Mar 09 Super-User ( 1) user account
 3 N Mar 09 Super-User ( 1) sample

*-Mutt: /var/mail/marcs [Msgs:3 New:3 1.6K]---(date/date)----- (all)---
```

Enter . mutt 가

```
i:Exit -:PreoPg <Space>:NextPg u:View Attachm. d:Del r:Reply j:Next ?:Help
X-Original-To: marcs@localhost
Delivered-To: marcs@localhost
To: marcs@localhost
Subject: test
Date: Tue, 9 Mar 2004 10:28:36 +0200 (SAST)
From: Super-User <root@localhost>

This is a test message, please reply if you receive it.

-N - 1/1: Super-User      test      -- (all)
```

mail(1) mutt 가

r .  
g .

Note: mutt vi(1)

가 .muttrc editor

m mutt 가 vi(1)

vi

mutt y

```
y:Send q:Abort t:To c:CC s:Subj a:Attach file d:Descrip ?:Help
From: Marc Silver <marcs@localhost>
To: Super-User <root@localhost>
Cc:
Bcc:
Subject: Re: test
Reply-To:
Fcc:
Security: Clear

-- Attachments
- I 1 /tmp/mutt-bsd-c0hobscQ [text/plain, 7bit, us-ascii, 1.1K]

-----
Mutt: Compose [Approx. msg size: 1.1K Atts: 1]
```



? mutt 가 . 가

## 22.11.3 pine

pine 가 가 .

: pine ,

. pine

FreeBSD

. pine 가 .

pine mail/pine4 . pine

:

% pine

pine , 가

pine

Enter

가 E :

```

PINE 4.58  GREETING TEXT  No Messages
<<<This message will appear only once>>>

Welcome to Pine ... a Program for Internet News and Email

We hope you will explore Pine's many capabilities. From the Main Menu,
select Setup/Config to see many of the options available to you. Also
note that all screens have context-sensitive help text available.

SPECIAL REQUEST: This software is made available world-wide as a public
service of the University of Washington in Seattle. In order to justify
continuing development, it is helpful to have an idea of how many people
are using Pine. Are you willing to be counted as a Pine user? Pressing
Return will send an anonymous (meaning, your real email address will not
be revealed) message to the Pine development team at the University of
Washington for purposes of tallying.

Pine is a trademark of the University of Washington.

[ALL of greeting text]
? Help      E Exit this greeting  PrevPage  P Print
Ret [Be Counted!]  Spc NextPage
    
```

pine inbox |  
"MESSAGE INDEX" :

```
PINE 4.58  MAIN MENU  Folder: INBOX 3 Messages

?  HELP          - Get help using Pine
C  COMPOSE MESSAGE - Compose and send a message
I  MESSAGE INDEX - View messages in current folder
L  FOLDER LIST   - Select a folder to view
A  ADDRESS BOOK  - Update address book
S  SETUP         - Configure Pine Options
Q  QUIT         - Leave the Pine program

Copyright 1989-2003. PINE is a trademark of the University of Washington.

? Help          P PrevCmd      R RelNotes
O OTHER CMDS > [Index] N NextCmd     K KBlock
```

Enter

```
PINE 4.58  MESSAGE INDEX  Folder: INBOX  Message 1 of 3 ANS

A  1 Mar  9 Super-User      (471) test
A  2 Mar  9 Super-User      (479) user account
A  3 Mar  9 Super-User      (473) sample

? Help          < FldrList  P PrevMsg      | PrevPage  D Delete      R Reply
O OTHER CMDS > [ViewMsg] N NextMsg     Spc NextPage  J Undelete    F Forward
```

pine

가

MUA

```
PINE 4.58 MESSAGE TEXT Folder: INBOX Message 1 of 3 ALL ANS
Date: Tue, 9 Mar 2004 10:28:36 +0200 (SAST)
From: Super-User <root@localhost>
To: marcs@localhost
Subject: test

This is a test message, please reply if you receive it.

[ALL of message]
? Help      < MsgIndex  P PrevMsg      - PreVPage D Delete    R Reply
O OTHER CMDS > ViewAttch N NextMsg    Spc NextPage U Undelete  F Forward
```

pine

pine

pico

.pico

vi(1) mail(1)

Ctrl + X

.pine

```
PINE 4.58 COMPOSE MESSAGE REPLY Folder: INBOX 3 Messages
To      : Super-User <root@localhost>
Cc      :
Attchmnt:
Subject : Re: test
----- Message Text -----

I did recieve your message...

^G Get Help  ^X Send      ^R Read File ^Y Prev Pg   ^K Cut Text  ^O Postpone
^C Cancel    ^J Justify   ^U Where is  ^V Next Pg   ^U UnCut Text ^T To Spell
```

pine

SETUP

<http://www.washington.edu/pine/>

## 22.12. fetchmail

fetchmail IMAP POP

IMAP POP

.fetchmail mail/fetchmail  
가 :

- POP3, APOP, KPOP, IMAP, ETRN ODMR .
- , SMTP
- .
- .

fetchmail

가 .fetchmail .fetchmailrc  
가 .

% chmod 600 .fetchmailrc

.fetchmailrc POP  
fetchmail joesoap XXX example.com  
joesoap 가 .

poll example.com protocol pop3 username "joesoap" password "XXX"

POP IMAP

```
poll example.com proto pop3:
user "joesoap", with password "XXX", is "jsoap" here;
user "andrea", with password "XXXX";
poll example2.net proto imap:
user "john", with password "XXXXX", is "myth" here;
```

```
fetchmail .fetchmailrc fetchmail (
) -d .
```

```
% fetchmail -d 60
```

```
fetchmail http://www.catb.org/~esr/fetchmail/ .
```

## 22.13 procmail

```
procmail .
```

```
가 . procmail mail/procmail .
MTA ; MTA .
procmail .forward
가 procmail :
```

```
"|exec /usr/local/bin/procmail || exit 75"
```

```
procmail .
.procmailrc .
```

```
procmail(5) .
```

```
user@example.com
goodmail@example2.com :
```

```
:0
* ^From.*user@example.com
! goodmail@example2.com
```

1000 bytes

[goodmail@example2.com](mailto:goodmail@example2.com)

:

```
:0
* < 1000
! goodmail@example2.com
```

[alternate@example.com](mailto:alternate@example.com)

alternate

:

```
:0
* ^TOalternate@example.com
alternate
```

"Spam"

/dev/null

:

```
:0
^Subject:. *Spam
/dev/null
```

FreeBSD.org

:

```
:0
* ^Sender:.owner-freebsd- /[^@]+@FreeBSD.ORG
{
  LISTNAME=${MATCH}
  :0
  * LISTNAME??^ /[^@]+
  FreeBSD-${MATCH}
}
```