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# FreeBSD

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Korea FreeBSD Users Group – <http://www.kr.FreeBSD.org/>

## Chapter 19 :

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: 2004 8 7  
: 2005 3 8  
: 1.0

FreeBSD Documentation Project FreeBSD Handbook 2004 8

7 . FreeBSD Handbook ,  
, CVS Repository  
,  
,  
가  
가 . KFUG(Korea FreeBSD Users Group)  
KFUG

“FreeBSD Handbook” “FreeBSD Documentation Project” , “ FreeBSD  
” “ (Young-oak Lee)” .

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## 19

### 19.1

FreeBSD

가

- : FreeBSD-STABLE FreeBSD-CURRENT.
- CVSup, CVS CTM
- make world

:

- (24 ).
- 가 (4 )

### 19.2 FreeBSD-CURRENT FreeBSD-STABLE

FreeBSD 가 : FreeBSD-CURRENT FreeBSD-STABLE.

. FreeBSD-CURRENT

FreeBSD-STABLE .

#### 19.2.1 FreeBSD

FreeBSD-CURRENT 가 가 FreeBSD  
. FreeBSD-CURRENT 가 가

FreeBSD CURRENT

### 19.2.1.1 FreeBSD-CURRENT 가?

FreeBSD-CURRENT 가 FreeBSD  
가 가  
FreeBSD FreeBSD-CURRENT  
가 가  
FreeBSD-CURRENT 가  
가

### 19.2.1.2 FreeBSD-CURRENT 가?

FreeBSD-CURRENT 3 가 가 :

FreeBSD "current"

가 FreeBSD-CURRENT  
FreeBSD  
FreeBSD  
current ( )

### 19.2.1.3 FreeBSD-CURRENT ?

FreeBSD - CURRENT

" ". FreeBSD - CURRENT 37가

FreeBSD  
FreeBSD

### 19.2.1.4 FreeBSD - CURRENT

freebsd - current (<http://lists.freebsd.org/mailman/listinfo/freebsd - current>) cvs -  
all (<http://lists.freebsd.org/mailman/listinfo/cvs - all>)  
가 . freebsd - current  
current

cvs - all 가

가

<http://lists.FreeBSD.org/mailman/listinfo> 가

FreeBSD ([http://www.freebsd.org/doc/en\\_US.ISO8859-1/books/handbook/mirrors.html](http://www.freebsd.org/doc/en_US.ISO8859-1/books/handbook/mirrors.html)) 가 가

a. /usr/share/examples/cvsup standard - supfile  
cvsup  
가 cron cvsup  
supfile  
cvsup



가 가 .

[1]: . FreeBSD  
FreeBSD  
<http://www.FreeBSD.org/security/> .

FreeBSD - STABLE 가  
가 가 FreeBSD - STABLE FreeBSD -  
CURRENT FreeBSD - CURRENT FreeBSD - STABLE  
FreeBSD - CURRENT 가 FreeBSD -  
STABLE .  
FreeBSD - STABLE  
FreeBSD - STABLE .  
STABLE 가 FreeBSD ,

### 19.2.2.3 FreeBSD - STABLE

freebsd - stable (<http://lists.freebsd.org/mailman/listinfo/freebsd - stable>)  
가 . FreeBSD - STABLE 가  
가

cvss - all 가

가  
<http://lists.FreeBSD.org/mailman/listinfo> 가

stable 가

ftp://snapshots.jp.FreeBSD.org/pub/FreeBSD/snapshots/ 가

([http://www.freebsd.org/doc/en\\_US.ISO8859-1/books/handbook/mirrors.html](http://www.freebsd.org/doc/en_US.ISO8859-1/books/handbook/mirrors.html)) 가 FreeBSD - STABLE  
가 FreeBSD - STABLE

FreeBSD FreeBSD  
가 가  
:

a. /usr/share/examples/cvsup standard - supfile  
cvsup  
가 cron cvsup  
supfile  
cvsup

b. CTM 가  
cvsup ftp CTM

FreeBSD - STABLE /usr/src Makefile  
FreeBSD - STABLE /usr/src/UPDATING

## 19.3

FreeBSD ( email) 가  
CVS([http://www.freebsd.org/doc/en\\_US.ISO8859-1/books/handbook/anoncvs.html](http://www.freebsd.org/doc/en_US.ISO8859-1/books/handbook/anoncvs.html)),  
CVSup([http://www.freebsd.org/doc/en\\_US.ISO8859-1/books/handbook/cvsup.html](http://www.freebsd.org/doc/en_US.ISO8859-1/books/handbook/cvsup.html))

CTM([http://www.freebsd.org/doc/en\\_US.ISO8859-1/books/handbook/ctm.html](http://www.freebsd.org/doc/en_US.ISO8859-1/books/handbook/ctm.html))

가  
 ( /bin  
 /sbin )  
 ,  
 가  
 CVS CVSsup pull CVSsup  
 가 cvsup cvsup  
 가 CVSsup CVS  
 CVS CVSsup CVSsup CVSsup CVS 가  
 CTM 가 가 CTM  
 ( ASCII )  
 CTM , ,  
 ctm\_rmail(1) CVSsup  
*pull push*  
 가 CVSsup  
 CTM  
 ( ) CTM  
 CVS

## 19.4 make world

FreeBSD (FreeBSD-STABLE, FreeBSD-CURRENT )



```

: make world
world (
가

CURRENT
가

(
가
가

FreeBSD-STABLE FreeBSD-CURRENT FreeBSD-STABLE
FreeBSD-CURRENT

```

## 19.4.1

```
# make buildworld
# make buildkernel
# make installkernel
# reboot
```

```
( boot -s )
```

```
# mergemaster -p
# make installworld
# mergemaster
# reboot
```

### 19.4.2 /usr/src/UPDATING

```
/usr/src/UPDATING (
)
가 . UPDATING UPDATING
: UPDATING 가
. 가
```

### 19.4.3 /etc/make.conf

```
/etc/defaults/make.conf /etc/make.conf
가 가 ;
/etc/make.conf 가 . /etc/make.conf 가
make
/etc/defaults/make.conf CFLAGS NOPROFILE
/etc/make.conf
(COPTFLAGS, NOPORTDOCS )
```

## 19.4.4 /etc

/etc

FreeBSD

가 , /etc/group

"make world"

가

가

smmsp 가 가 .mtree(8)가 /var/spool/clientmqueue

/usr/src/etc/group

/etc/group /usr/src/etc/group

GID 가

4.6-RELEASE world -p

mergemaster(8) . buildworld installworld

mergemaster 가 -p

:

# cd /usr/src/usr.sbin/mergemaster

# ./mergemaster.sh -p

Tip:

:

# find / -group GID -print

GID ( ID)

## 19.4.5

```
가 )  
  
가  
installkernel installworld  
:  
  
# shutdown now  
  
-s  
:  
  
# fsck -p  
# mount -u /  
# mount -a -t ufs  
# swapon -a  
  
/ /etc/fstab  
UFS  
  
Note: CMOS GMT 가(date(1)  
)  
:  
  
# adjkerntz -i  
;
```

## 19.4.6 /usr/obj

```

/usr/obj ( ) .
/usr/src .
"make world"
.

/usr/obj 가 (
chflags(1) ).

# cd /usr/obj
# chflags -R noschg *
# rm -rf *

```

## 19.4.7

### 19.4.7.1

```

make(1) . 가
FreeBSD .
가 script(1)
.world script(1)
exit .

```

```

# script /var/tmp/mw.out
Script started, output file is /var/tmp/mw.out
# make TARGET
... compile, compile, compile ...
# exit
Script done, ...

```

/tmp

/var/tmp( ) root

### 19.4.6.2

/usr/src :

# cd /usr/src

( 가 가 )

world make(1) FreeBSD  
Makefile

:

# make -x -D*VARIABLE* *target*

-x make(1) make(1)

-D*VARIABLE* Makefile Makefile  
/etc/make.conf

# make -DNOPROFILE *target*

/etc/make.conf

**NOPROFILE= true # Avoid compiling profiled libraries**

*target* make(1) Makefile

Makefile

가

가

make(1)

가

:

**# make target**

FreeBSD 2.2.5 ( FreeBSD-CURRENT

FreeBSD-STABLE 2.2.2 2.2.5 ) world :

buildworld installworld.

buildworld /usr/obj

installworld

2 가

buildworld

installworld

3 NFS . A, B C  
A make buildworld make installworld  
B C /usr/src /usr/obj A NFS make installworld  
B C

world

:

**# make buildworld**

-j make

CPU 가

CPU

IO 가

CPU 가

CPU 가

# make -j4 buildworld

```
make(1)      4
              .
              .
              .
              CPU 가 SMP 6 10
              가 가
              .
              가
              .
              world
```

### 19.4.7.3

```
가
500Mhz      III 128MB      FreeBSD-STABLE
2           . FreeBSD-CURRENT
```

### 19.4.8

```
가
ps(1) top(1)
.
가      GENERIC
. GENERIC      가
가
. GENERIC
FreeBSD      world
```

**Note:**



*KERNCONF=MYKERNEL* :

```
# cd /usr/src
# make buildkernel KERNCONF=MYKERNEL
# make installkernel KERNCONF=MYKERNEL
```

```
FreeBSD 4.2          KERNCONF=  KERNEL=
4.2-STABLE  2001    2          KERNCONF=
```

```
kern.securelevel  1          noshchg
                    installkernel
                    . kern.securelevel
                    init(8)    chflags(1)
```

```
FreeBSD 4.0
                    config(8)
```

```
# /usr/obj/usr/src/usr.sbin/config/config KERNELNAME
```

## 19.4.8

19.4.5

## 19.4.9

```
make buildworld          FreeBSD
                    installworld
```

:

```
# cd /usr/src
# make installworld
```

**Note:** make buildworld

make installworld

-j installworld

# make -DNOPROFILE buildworld

# make -DNOPROFILE installworld

make buildworld

## 19.4.10 make world

world ( /etc,  
/var /usr)

가 가  
mergemaster(8) 가  
/etc

### 19.4.11.1 mergemaster

mergemaster(8) /etc  
/usr/src/etc

mergemaster 3.3- 3.4- FreeBSD  
3.3 -STABLE -CURRENT 가

```

mergemaster
mergemaster / root
가 + -
가 diff(1) diff(1)

```

```

mergemaster(8) (
),
diff(1)

```

**/etc/hosts**

```

Use 'd' to delete the temporary ./etc/hosts
Use 'i' to install the temporary ./etc/hosts
Use 'm' to merge the temporary and installed versions
Use 'v' to view the diff results again

Default is to leave the temporary file to deal with by hand
How should I deal with this? [Leave it for later] m
:::1 localhost.example.com localhost | #FreeBSD: src/etc/hosts.v 1.11.2.4 2003/02/06 20:36:58 dbak
127.0.0.1 localhost.example.com localhost | #
10.1.100.244 test.example.com test | # Host Database
10.1.100.244 test.example.com. | #
> # This file should contain the addresses and aliases for loca
> # share this file. Replace "my.domain" below with the domain
> # machine.
> #
> # In the presence of the domain name service or NIS, this fil
> # not be consulted at all; see /etc/host.conf for the resolut
> #
> #
> :::1 localhost localhost.my.domain
> 127.0.0.1 localhost localhost.my.domain

```

[19-1.bmp]

```

mergemaster(8)
가
. ? mergemaster(8)
가

```

```

%?
l: use the left version
r: use the right version
e l: edit then use the left version
e r: edit then use the right version
e b: edit then use the left and right versions concatenated
e: edit a new version
s: silently include common lines
v: verbosely include common lines
q: quit

```

[19-2.bmp]

```

|
r
.
가

diff(1)                                mergemaster(8)

mergemaster(8)                          . mergemaster(8)

FreeBSD 5.0

MAKEDEV(8)

mergemaster
```

```
*** Comparison complete
*** Files that remain for you to merge by hand:
/var/tmp/temproot/etc/hosts
/var/tmp/temproot/etc/motd
Do you wish to delete what is left of /var/tmp/temproot? [no] █
```

[19-3.bmp]

### 19.4.11.2

```

/usr/src/etc      /etc
" "              /usr/src/etc      /etc
가 /etc          /usr/src/etc
```

mergemaster(8)

```

가
.
/etc :
. /etc
:

# cp -Rp /etc /etc.old

-R -p
/etc 가 . /var/tmp/root 가
가

# mkdir /var/tmp/root
# cd /usr/src/etc
# make DESTDIR=/var/tmp/root distrib - dirs distribution

. /var/tmp/root
. 가
:

# cd /var/tmp/root
# find -d . -type d | xargs rmdir 2>/dev/null

(
/dev/null )

/var/tmp/root /
.

/var/tmp/root "." 가
/var/tmp/root /var/tmp/root/root
. ls -a

```

```

가          diff(1)          :

# diff /etc/shells /var/tmp/root/etc/shells

    /etc/shells          /var/tmp/root/etc/shells
.
.

root      (/var/tmp/root)
          :          world          /etc
.

/etc
.

          world          . /etc          가
          1998  2

14          :

# mkdir /var/tmp/root-19980214
# cd /usr/src/etc
# make DESTDIR=/var/tmp/root-19980214
    distrib -dirs distribution

/var/tmp/root-19980214
.

          1          .

    /var/tmp/root-19980221
    (          ).

          가

diff(1)
# cd /var/tmp
# diff -r root-19980214 root-19980221

```

```

/var/tmp/root-19980221/etc /etc
.
.
.
/var/tmp/root- *
# rm -rf /var/tmp/root-19980214
/etc 가
date(1)
# mkdir /var/tmp/root-`date "+%Y%m%d"`

```

## 19.4.12 /dev

```

Note: FreeBSD 5.0
devfs(5)
mergemaster(8) 가
가
/var/tmp/root/dev/MAKEDEV /dev :
# cp /var/tmp/root/dev/MAKEDEV /dev
/etc mergemaster(8) MAKEDEV 가
/dev 가
major minor
가 가 awk(1)
# cd /dev

```

```
# ls -l | awk '{print $1, $2, $3, $4, $5, $6, $NF}' > /var/tmp/dev.out
```

:

```
# sh MAKEDEV all
```

```
/var/tmp/dev2.out
```

가

```
# diff /var/tmp/dev.out /var/tmp/dev2.out
```

가

```
# sh MAKEDEV sd0s1
```

## 19.4.13 /stand

**Note:** FreeBSD 5.2

```
/rescue make installworld
```

```
/stand
```

```
/stand
```

```
/stand/sysinstall
```

```
( /usr)
```

```
# cd /usr/src/release/sysinstall
```

```
# make all install
```



## 19.4.14

shutdown (8) :

# shutdown -r now

## 19.4.15

FreeBSD !

가

/etc

/etc/magic

file(1)

# cd /usr/src/usr.bin/file

# make all install

## 19.5.16

### 19.4.16.1

world

가?

CVSup

world

가

```
src/games/cribbage/instr.c
src/games/sail/pl_main.c
src/release/sysinstall/config.c
src/release/sysinstall/media.c
src/share/mk/bsd.port.mk
```

```

가 make all install
src/lib/libc/stdlib world
( 가 ).

FreeBSD - STABLE
FreeBSD - CURRET

19.4.16.2 11 ( )
가?
.world
가 가

make 가 가
가

19.4.16.3 world /usr/obj 가?

/usr/obj 가 "make
world"
/usr/obj 가 ( 340MB ).

"make world"
/usr/obj 가
./usr/obj 가
가 FreeBSD

```

#### 19.4.16.4

가?

```

가
( ) "make world" (gcc(1))
make(1) )
가
(ls(1) grep(1) )
( )
( ):

```

```

... fix the problem ...
# cd /usr/src
# make -DNOCLEAN all

```

```

"make world"
"make world" :
-----
Building everything..
-----

```

#### 19.4.16.5 world

가?

-

- /usr/src /usr/obj . 가
  
- ccd(4) ( )
  
- (/etc/make.conf ``NOPROFILE=true").
  
- /etc/make.conf -O -pipe CFLAGS . -O2  
-O -O2 가 . -pipe ( )
  
- -jn make(1)
  
- /usr/src 가 noatime ( )  
가
  
- # mount -u -o noatime /usr/src
  
- : /usr/src 가 가  
( /usr ) /usr/src 가  
가
  
- /usr/obj 가 async ( )  
가
  
- :
  
- 가

/usr/obj 가 .  
가 .

```
# mount -u -o async /usr/obj
```

/usr/obj 가

## 19.4.16.6 가 가?

```
# chflags -R noschg /usr/obj/usr  
# rm -rf /usr/obj/usr  
# cd /usr/src  
# make cleandir  
# make cleandir
```

make cleandir

make buildworld

가 uname -a FreeBSD

## 19.5

: , CPU.  
NFS

## 19.5.1

가 .

가 .

world . make world

CPU 가 .

가 /usr/obj /usr/src

가 /usr/src

NFS .

/etc/make.conf .

/etc/make.conf KERNCONF 가 ,

KERNCONF

/usr/src/sys/arch/conf

가 .

## 19.5.2

가 . 19.4.7.2

world 가

/usr/src /usr/obj NFS

가 가

shutdown now world

mergemaster .

### 19.5.3

```
. /usr/ports
. /etc/make.conf
distfiles . NFS root 가
DISTDIR . WRKDIRPREFIX
PACKAGES . DISTDIR
```