

#####  
#####

#####  
#####

#####: 43126

##### © 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011,  
2012 #####

#####.

#####, #####, #####, #386, #486, #####, #####,  
### ### #####  
#####  
#####.

#####, #####64, #####  
#####,  
#####,  
#####.

####  
#####.  
#####,  
#####.

2013#11#07 #####.

#####

|                 |    |
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#####

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1. #####

```
##### # #####  
##### #, # Ports # ##### # # #  
#Clusters # #####. ##### cluster # # # # http://  
pointyhat.FreeBSD.org.
```

```
##### ##### ##### ## ##### ##### ## cluster
```



####

```
#####  ### #####  #####  #####  ## #####  #####
### #####  ## #####  ###  ##  # #####  ## #####  ##
Ports
```

```
1.1. #####
```

```
# ##### # ## ##### # ##### # ##### # # ##### /var/
portbuild. # ##### # ## ##### # #####, #### # #####
##### # #### #####. # ${arch} #### ##### #####
##### # ##### (#64, 386™, #64, #####, # #####64®, # ${branch} ####
##### # branch (#### # #####) # ##### (7, 7###,
8, 8###, 9, 9###, 10, 10###).
```



####

```
### ## ##### ##### ## ##### 4, 5 ## 6, #
##### # #####
```

```
#####  
#####
```

```
## scripts ##  
## base/projects/portbuild/scripts/.
```

```
#####  
#####;  
#####:
```

- ##### -STABLE
- ##### -CURRENT
- #####

## 1.2. #####

```
## 2010, ## scripts ##### pointyhat ##  
##### (#####). ##### 2010, #####  
##### hosts #####. #####  
#####:
```

- ##### string pointyhat #####
- ##### (#####)
- ##### hostname ##### buildid (#####)
- ##### scripts ##### links
- ##### scripts #####

```
#####  
##### scripts, #####  
##### novo código base: ##### antigo código base:.
```



####

```
#### 2010, # pointyhat #####  
# #####, ## # #####  
#####.
```

```
##### ##  
#####
```



####

```
#####  
#####  
#####
```

## 2. #####

```
#####386™##### # pointyhat, ##### boot #####  
##### (### conectados); ##### (### desconectados) #####  
##### boot ##### hostpxe. #####  
##### boot #####
```

```
# cluster #####, ##### # rsync, ##### (# ##### # ports  
# #####, bindist tarballs, scripts, ###.) ##### #  
##### portbuild #####  
nullfs ##### chroot.
```

```
# ##### ports-$(arch) ##### ## ##(1) #####  
###. ## # sudo # portbuild.hostname.conf #####
```

```
# script scripts/allgohans #####  
$(arch).
```

```
# script scripts/checkmachines # ##### #  
##### # ports. ##### script #####  
##### script #####  
(##### pointyhat) ##### boot ##### loop ## ##(1).
```

## 3. ##### Chroot

```
##### #  
portbuild ##### ${arch}/${branch}/builds/${buildid}/bindist.tar.
```

```
# ##### # build world # ##### #  
${branch}/builds/${buildid}/src/ # # ${worldid}. #  
##### -nocvs #####
```

```
/var/portbuild# scripts/makeworld ${arch} ${branch} ${buildid} [-nocvs]
```

```
#####  
#####
```

```
# ##### bindist.tar # ##### # world, #####, ##### script  
mkbindist. ##### root #####:
```

```
/var/portbuild# scripts/mkbindist ${arch} ${branch} ${buildid}
```

```
## tarballs ## ##### ${arch}/clients.
```

```
# ##### bindist.tar # ##### # #####  
#####, # ## ##### ## script dopackages.
```

### 3.1. #####

```
#### #####, ## # ${buildid} ##### latest, ####  
####.
```

## 4. #####

```
(# ##### # ##### # ##### # #####.)
```

```
#### ##### # ##### # ##### # make.conf  
##/## src.conf, ##### # ${arch}/${branch}/builds/${buildid}/make.conf.server # ${arch}/${branch}/  
builds/${buildid}/src.conf.server, #####. #####, ## ##  
#####.
```

```
## #####, ## ##### # make.conf ## lado do cliente, ####  
#### # ${arch}/${branch}/builds/${buildid}/make.conf.client.
```



####

```
##### # ##### # ##### # #####  
### ##### make.conf, # ##### # ${arch}/${branch}/builds/${buildid}/  
make.conf.client ### adicionado ## make.conf, # #####,  
#### # ##### # ${arch}/${branch}/builds/${buildid}/make.conf.server.
```



####

```
### ##### # ##### # ##### # ${arch}/  
${branch}/builds/${buildid}/src.conf.client (# #####?).
```

```
##### 1. ##### ## make.conf.target #####
# ##### ##### ##
```

```
(##### ##, ## ##### ##### #####, ##### # #####.)
```

```
RUBY_DEFAULT_VER= 1.9
```

```
##### 2. ##### ## make.conf.target #####
##### ##
```

```
(##### ##, ## ##### ##### #####, ##### #
#####.)
```

```
.if -!defined(CC) -|| ${CC} == -"cc"
CC=clang
.endif
.if -!defined(CXX) -|| ${CXX} == -"c++"
CXX=clang++
.endif
.if -!defined(CPP) -|| ${CPP} == -"cpp"
CPP=clang-cpp
.endif
# Don't die on warnings
NO_WERROR=
WERROR=
```

```
##### 3. ##### ## make.conf.server #####
```

```
WITH_PKGNG=yes
PKG_BIN=/usr/local/sbin/pkg
```



```
dopackages.7 ${arch} ${buildid} [-options]
```

```
#### # # # # # dopackages.wrapper #####, ## ##### ## links #####. ##
#####:
```

dopackages.wrapper *{arch}* *{branch}* *{buildid}* [-options]

```
##### latest ##### # buildid.
```

```
[-options] ##### ### ####, ### ## ####, ### ##### #####:
```

- 8



#####  
#####

- -continue # #####  
#####
- -incremental # ##### INDEX #####  
##### log ports #####  
#####. ##### ports #####
- -cdrom # ##### NO\_CDROM # disfiles #####
- -nobuild # #####
- -noindex # ##### INDEX #####
- -noduds # ##### duds (ports #####  
##### IGNORE, NO\_PACKAGE, ##.) #####
- -nochecksubdirs # ##### SUBDIRS ##### ports #####  
#####. (#####).
- -trybroken # ##### ports ##### BROKEN (#####  
##### clusters ##64/#386™ #####  
#####  
##### clusters #####  
##### ports ##### BROKEN).



####

### -trybroken, ##### -  
fetch-original (##, #####, -unlimited-errors).

- -nosrc # ##### src # ##### snapshot ##  
#####
- -srcvcs # ##### src # ##### snapshot ##  
##### cvs update.
- -noports # ##### ports # ##### snapshot ##  
#####

- -portscvs # ### ##### # ##### ## ports # ##### ## snapshot ## ##, ## ## ##### ##  
# ##### ## ## cvs update.
- -norestr # ### ##### ##### ports ##### ## RESTRICTED.
- -nolistcheck # ### ##### ##### ## ports ##### ##### ## ## ##  
#####.
- -nodistfiles # ### ##### ## distfiles ### ##### ## make checksum ##### ## ##  
*upload* ##### # ftp-master.
- -fetch-original # ##### # distfile # ##### ## MASTER\_SITES #####, ## ## ## ftp-master.
- -unlimited-errors (##### ## ## ## ##) # ##### # ##### ## ##  
## ##### ## ## #####. ##### ## ## ##  
##### ## ## -restart ## ## ## ## ##  
#####, ## ## ## ## -trybroken. # ## ## ## ##.

```
# ##### ## ## ## -restart, -continue, ## -finish, ## links ##### ## ##
##### ## ## ##. ##### #, # link ##### ## ## previous
##### ## ## ## ## ## ## ## link ##### ## ## previous; # #
##### ## ## ## ## ## ## ## ## ## link ## latest/.
```

```
## # ##### ##### ## ## ## ##, ## ## ## ## ##.
## ## ## ## ##, ## ## ## # ## ## -nocleanup, ## ## ## ## ##
##### ## ## ##:
```

```
build cleanup ${arch} ${branch} ${buildid} -full
```

```
## ##### errors/, logs/, packages/, # ##### ## ## ##, ## ## ## ## scripts. ## ## ##
## ## ## ## ##, ##### ## ## ## # ports/distfiles/. ## ## ## ##
latest; ## # ## ## ## ## ## ## ##.
```



####

```
# dosetupnodes ##### # ##### ## ## script dopackages
## ## ## -restart, ## ## ## ## ## ## ## ##
##### # ##### ##### ## ## ## ## ##
# ##### ## ##### #####. ##### ## ## dosetupnode ##
#### ## ## ## ## ## ## ## ## ## ## ##
#####. (#### # ## #####.)
```

```
##### ## # ##### ## ## ## ## # ##### ## ## ## ${arch} ## ## ## ##
##### ## ## ## ## ## ## ## ## ## ## ## ## ## ## ## ## ##.
```



```
##### ports/Makefile ##### ## ##### ##### #####.
##### # ##### ## ## ## ##### ##
patches ##### (###). ## # ##### ## ##### ## #####
##### , ##### ## ##### ## ##### ## ##### , ## ## ##
##### ## ##### ## $ {arch}/${branch}/make.[01]:
```

don't know how to make dns-all(continuing)



dopackages.wrapper i386 7 -nosrc -norestr -nofinish

```
##### 7. ##### ## ##### ## ##64#8
##### ## #####
```

```
dopackages.8 amd64 -nosrc -noports -norestr -continue -noindex -noduds -nofinish
```

```
dopackages.wrapper amd64 8 -nosrc -noports -norestr -continue -noindex -noduds -nofinish
```

```
##### 8. ##### # ##### ## ##
##### ##64#7 #####
```

```
dopackages.7 sparc64 -finish
```

```
dopackages.wrapper sparc64 7 -finish
```

```
####: ##### # ##### # ##### dopackages ##### ## screen(1).
```

## 5.2. # ##### build

```
#### ##### ##### ## ##### ## ##### ## #####
##### ##### #####. #### # ##### ## # ##### build.
#### ##### ##### ##### #####:
```

- build create arch branch [newid] # ##### ## newid (## ## timestamp, ## ## ## ##). ##  
# ##### ## ## ## ## ## branch ## ## ## ##. (####:  
##### ## newid ##### ## ## latest ## ## ##).
- build clone arch branch oldid [newid] # ##### ## oldid ##### # newid (## ## timestamp, ##  
## ## ##).
- build srcupdate arch branch buildid # ##### # ##### src ### ## ## snapshot ## ##. ##  
## ## ## ## ## -nosrc ##### ## dopackages #####!
- build portupdate arch branch buildid # ##### # ##### ## ports ### ## ## snapshot ## ##.  
### ## ## ## ## -noports ##### ## dopackages #####!

## 5.3. ##### ## #####

```
##### ##### # ##### ## ##### # ##### ## ##### ##
#####. ##### ## ##### # #####:
```

```
#####  
#####
```

---

```
path/qmanager/packagebuild amd64 7-exp 20080904212103 aclock-0.2.3_2.tbz
```

## 6. #####

```
#####,###-no#####  
#####:
```

1. ##### ports ##### snapshot ##### [#]
2. ##### branch ##### src ##### snapshot ##### [#]
3. ##### ports ##### SUBDIR ##### Makefile #####  
##### [#]
4. ##### duds,##### ports ##### ##### [#] [+]
5. ##### INDEX ##### [#] [+]
6. ##### ##### ##### [#] [+]
7. ##### ##### ports ##### [#] [+]
8. ##### (#### 1) [++]
9. ##### ##### ##### [+]
- 10.##### (#### 2) [++]

```
[#] ##### ${arch}/${branch}/build.log,###  
## stderr ## tty ##### dopackages #####.
```

```
[+] #####,#####.
```

```
[++] ##### ${arch}/${branch}/make (#####  
#####) ## ${arch}/${branch}/journal (#####). Ports #####  
##### logs ## ${arch}/${branch}/logs # ## logs ## ## ${arch}/  
${branch}/errors.
```

```
#####,#####  
#####.
```

## 7. #####

```
#####:
```

1. #####.
2. # pointyhat #####.

#####

3. # qmanager ##### # #####

7.1. #####

```
# ##### # ## ##### ## ##### # ## #####  
##### .##### ty## ### #######  
##### (## ##### ## ##(1) ##### ## ,  
## ##### ps x #####).#### ##  
#### ##### ty, #### #####  
##### ps, ## ##### -t p1 ##### ##  
##### ## 1. ##  
##### ,#### pkil  
-tps/;## ##### kill-HUP, ## -,ps-t pts/1 -o pid= |xargs kill-HUP.####  
##### pl #### ty #####.
```

```
# ##### ## ##### ##### make ##### ## ##### ##### ## ## #####
##### ##### ##### (##### ## ps x ##### ##### #####).
```

```
## ##### ## ##### ## ###(1), ## ## ##### ##### ##### ## #####. ##
##### ## ##### dopackages ## ## ##### ## #####. ## ## ##
##### ## ##### pdispatch, ##### ## ## (## #####) ## #####
## ##### ## #####.
```

7.2. #####

```
#####  
##### build cleanup. ###
```

```
% /var/portbuild/scripts/build cleanup i386 8-exp 20080714120411 --full
```

```
## ##### ##### ## ##### ##, ##### ## chroot# ## ##### ##### ## #####
##### ## ##### 24 #####, # ##### ##### ##### ##### ## ## #####
##### # pointyhat ##### ## ##### ##### ##### ##### #####.
```

```
##### , ##### # ##### cat ~/loads/* ##### # ##### ## #####  
#####; # ##### # # ##### ## ##### ## ## #####  
##### , # #### # #### # #### # #### # #### . loads # ##### #  
#### 2 #####. ## ##### ## ps x | grep pdispatch # ## #####  
## ## ## ## loads ##### ## ##. ##### ## #####.
```

```
##### amount #####.##
##### script allgohans ##### ##(1) ##
#####:
#####
```

```
ssh -l root gohan24 df
```

```
#### #### #### ## df, #
```

```
allgohans -"umount --f pointyhat.freebsd.org:/var/portbuild/i386/8-exp/ports"
```

```
#####  
#####
```

```
allgohans -"umount --f pointyhat.freebsd.org:/var/portbuild/i386/8-exp/src"
```

```
#####  
#####  
#####  
#####  
#####
```



####

#####:

```
umount: pointyhat.freebsd.org:/var/portbuild/i386/8-exp/ports: statfs: No -  
such file or directory  
umount: pointyhat.freebsd.org:/var/portbuild/i386/8-exp/ports: unknown file -  
system  
umount: Cleanup of -/x/tmp/8-exp/chroot/53837/compat/linux/proc failed!  
/x/tmp/8-exp/chroot/53837/compat/linux/proc: not a file system root directory
```

```
##  
#####  
#####; ##  
#####
```

```
#####  
#####
```

```
#####  
#####  
#####  
#####
```

```
##  
#####  
#####
```

### 7.3. ##### build

```
##### build:
```

- build destroy arch branch # ##### id ## #####.
- build list arch branch # ##### # ##### ids ## #####.
- build upload arch branch # ##### # #####.

## 8. #####

```
#####  
#####
```

```
python path/qmanager/qclient jobs
```

##### # #####

python path/qmanager/qclient status

# ##### scripts/stats \${branch} ##### # ##### ## ##### ##### #####  
#####.

# ##### ## ## cat /var/portbuild/%/loads/% ##### # load ### ##### # # #####  
## ##### ## #####. ## ##### ## #####  
##### ## ##### ## ##### online; ## ##### ##  
## ##### ## ##### offline.



####

# ##### pdispatch ### # ##### ## ##### ##### # #####,  
##### ##### ## ##### # ##### ## #####  
##### ## #####. # ptimeout.host #####  
# ##### ## ##### # # ##### ##### # #####  
## timeouts. ##### ## ## ## 50 ##### pdispatch,  
### ##### 4 ##### **##(1)**, ##### ## 46 #####  
pdispatch## ##### ## ## ## ## ##.

##### tail -f \${arch}/\${branch}/build.log ### ##### # ##### ##### ## #####.

## # ##### ## port #####, # # ##### ## #####  
## ##### ## log, ##### ## WRKDIR ##### ## #####  
##### ## ## ## ## ## .keep ## ## port, ## ##  
#####, #####, # ##### # WRKDIR ##### \${arch}/\${branch}/wrkdirs.

## ##### ##### ## ##### ## ##### ## #####  
##### # ##### ## ## ## ## ## ##  
##### ## ## ##.

## ##### ## ##### ## ## ## ## ## ##  
## ##### ## ## ## ## ## ## ## ## ## ##  
## ## ##.

##### # ##### ## ## **##(1)**. ## # ##### ## ## ## /var/portbuild #####  
#####, ##### ##.

# ##### ## ##### ## ##### ## ## ## ## ## ##  
pointyhat.FreeBSD.org/errorlogs/packagestats.html. ##### buildenv # #####:

- cvs date # # ##### ## cvsdone. # ## ## ## ## ## ## ##  
# cvsdone ##### ## ## ## ## ## ## ## ## ## ##.
- ##### ## ## ## log (latest log)



- ##### ## ##### ## INDEX
- # ##### ##### ## logs ## ##### (build logs)
- # ##### ## ##### ##### (packages)
- # ##### ## ##### (errors)
- # ##### ## ports ##### (####) (##### ##### skipped)
- # ##### missing ##### # ##### ##### # INDEX # ## ##### #####. ## #####  
##### ## ##### ## ## cvs update, ##### ##### ##  
##### # ##### ## #####, # ##### ##### #####. (# script # #####).
- ## ##### ## ##### running # completed ### ##### ##### ## ## **###(1)** ##  
build.log.

```
##### ## port ##### # ### ##### ##### ##### ##### ##
##### ##, # ### ## ##### (BROKEN). #####
##### ## ##### ##, ##### ## #####.
```

```
##### ports #####  
##### distfiles # ~ftp/pub/  
FreeBSD/distfiles. #####  
#####  
#####  
#####.
```

```
## ##### ##### ## ##### ##### ## #####, ### #####
##### ##### ## ##### ## ports # ## src ##### # tag ## ##### #
#### ## ##### -nocvs # -noportscvs.
```

```
#### ##### ## ##### ## ##### ## ## #####, ### # ##### -
cdrom ##### dopackages.
```

```
## ## ##### ## ##### ## cluster, ## -nodistfiles ##### ## distfiles
#####.
```

```
#### ##### ##, ##### # ##### ## -restart -fetch-original
#### ##### ## distfiles #####. #####, ### ## ## ##### ##
#####, ## ## ##### ## ## ## #####:
```

```
% cd ${arch}/${branch}
% find distfiles > distfiles-${release}
```

```
#### ##### ## ##### ## i386/${branch} ## ##
##### ## cluster.
```

```
#### # ##### ## distfiles ## ftp-master. ##### # #####
## #####, ## distfiles ## ##### ##, #####
##### ##.
```

```
### ## ## # upload ## distfiles ##### ## (### ##), # ##### ##
##### ## ##### ## ##. ## ##, #####
# script ${arch}/${branch}/cdrom.sh ##### ## ## ##
##### ## distfiles #####. #####, #####
# ##### ${arch}/${branch}/packages ##### ${arch}/${branch}/packages-${release}. ## ## ##
##### ##, #####.### #
## ## ## release.
```

```
##### ## ## ##.### ## # timing # # ##### ##
##### ## release.
```

## 11. Upload ### #####

```
### ## ## # #####, ## ## /## distfiles ##### ##
##### # ftp-master ##### ## ## ##. ##
# ##### ## ## -nofinish, #####
## ##### dopackages-finish #####
(##### ## RESTRICTED ## ## NO_CDROM ## ##,
##### ## INDEX, ##### ## INDEX ##
##### ##, # ## ## CHECKSUM.MD5); # ## distfiles (#####
## ##### distfiles/.pbtmp ##### distfiles/ # ## distfiles
##### ## RESTRICTED # NO_CDROM).
```

```
# ##### ## ## scripts restricted.sh /## cdrom.sh ##### #
##### ## dopackages, ##### ##. ##### # script restricted.sh ##### #
```

```
##### # upload ##### # ftp-master, ## #####, ##### cdrom.sh ##### ## ##### #
##### ## ##### ##### ## release.
```

- packages-7.2-release
- packages-7-stable
- packages-8-stable
- packages-9-stable
- packages-10-current



```
##### ##### ##### ## ftp-master ### ## ##### links
#####.### #####:
```

- ##### # # # # #  
# # # # # *real*, # # # # # links #####  
### #####.

```
# cd -/var/portbuild/${arch}/${branch}
# tar cvf -- packages/- | ssh portmgr@ftp-master tar xfC -- w/ports/${arch}/tmp/${subdir}
```

```
##### upload ##### # rsync #####  
#####.
```

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##### ## Patches #####

##### ## ##### rsync #### # *upload* ##### ## #####:

```
# rsync --n --r --v --l --t --p ---delete packages/ portmgr@ftp-master:w/ports/${arch}/${subdir}/ -| tee log
```

## distfiles ##### ## ##### script cpdistfiles:

```
# /var/portbuild/scripts/cpdistfiles ${arch} ${branch} ${buildid} [-yesreally] -| tee log2
```

# ##### ##### ##### # ## #####.

## 12. ##### ## Patches #####

##### ## patches ##### ## ##### ## ##### ##  
##### ## ##### ## ##### ## ##### ## ports (#### #,  
bsd.port.mk), ## ##### ##### ## #####. # #####  
##### patches ## branchs #####, #### # 8-exp ##  
##### ##64.

##### # patches ##### ## ##### ##  
##### # ## ## ## ## ## ##  
## ports #### # ## #, ## ##, ## patches. #### ##  
##### # ## ## ##:

```
% cvs --R update --dP > update.out  
% date > cvsdone
```

#### # # ##### ## ## ## script dopackages ###. (##### # cvsdone ####  
##### # ## ## ##.)

#### ##### # update.out #### ##### ## ## ## ^M, ^C,  
## ^? ## ## ##.

# ##### ## ## ##### ## ##### ## ## ##  
##### # ## ## ## ## ## ## ## ## ##  
# ##### # commit ##, ## ## ## ## ## ##  
commit ##### ## ##.

#### ## ##### # ## ## ## ## ## ##  
##### # ## ## ## ## ## ## ## ## ## home #####  
freefall. ## ## # tmp/; ## # pointyhat ##### ## ## ## -CURRENT,  
#### ## ## ## ## ## ## ## ##.

#### ## ## ## ## ## ## ## ## ##  
##### # ## ## ## ## ## ## ## ## ## branch ##  
## ## patches ##### ## ## ## ## ## ## ## ## ##  
#### # # 8). ##### # ## patches #####,

```
#####  
#####
```

```
#### # checkout ## ##### ## ports # ## src ### # ##### ##### ## ## ## #####  
# ##### ## #####. #### ## ##### ## ##### #####  
#####
```

```
### ## ##### # #####, ##### ## ##### ## #####  
### ## ## ##### patches #####. ##### ## ##  
##### (##### # branch 8 #### branch ## #####, # # 8-exp #### branch  
#####):
```

```
% cd -/var/portbuild/i386/8-exp/errors  
% find -. --name \*.log\* -| sort > -/tmp/8-exp-errs  
% cd -/var/portbuild/i386/8/errors  
% find -. --name \*.log\* -| sort > -/tmp/8-errs
```



####

```
## ## ## ##### ##### ## # #####  
### #####, ## logs ##### ## ##  
#####2. ##### ## ## ## sort | sed  
's,\bz2,,g' ## ##
```

```
% comm -3 -/tmp/8-errs -/tmp/8-exp-errs -| less
```

```
#### ##### ## ##### ## ##### ## #####. # #####  
##### ## ports ### ##### ## #####, ## ## ##  
patches #####; # ##### # # ##### ## port #####  
#####
```

- # port ### ##### ## # ##### ## ##### ## ##  
##### ## ## ## ## ## ## ## ## (##### # #####  
##### ## ## ##)
- # port ### ##### patches #####
- # port ### ## ## ## ## patches ##### # ##  
## ##

```
##### ## # port ##### ## #####
```

- # port ### ##### patches ##### [1]
- # port ### ##### ## ## ## ## ## ## [2]
- # port ### ##### # ## ## ## ## ## ## ## ##  
##, ##### ## ## ##, ##.)

##### ## Patches #####

```
##### ## ##### ## ## ##### ## ## ##### #####
##### ## commit ## ##### ## patches #####. ##### ## [1] #
# [2] #####, ##### ## ##### ## ## ## branch ## #####:
```

```
% cd -/var/portbuild/i386/ports
```



####

```
##### ## ##### ## ## ## cvs update #### #
##### ## ## ## patches #####.
```

```
# ##### ## ## ## ## branch ## ## ## ## ##
(##### ## ##):
```

```
% /var/portbuild/scripts/dopackages.8 --noportscvs --nobuild --nocvs --nofinish
```

```
## ##### ## ## ## ## packages/All. ####
##### ## ## ## ## ## ## link ##### ## ## ##
## ## link ##### ## ## ## ## ## ##:
```

```
% cd -/var/portbuild/i386/packages/All
```

```
% ln -sf -./../Makefile -.
```

```
% make --k --j<#> <list of packages to build>
```



####

```
# <#> # # ##### ## ##### ## ## ##
##### ## ## ## ## ## ## /var/portbuild/
i386/mlist, # ##### ## ## ## ## ## ##
##### ## ## ## ##.
```

```
# ##### ## ##### ## ## ## ## ## ## ##
## ##### (##### ## ## ##) ## ## ## INDEX. #
PKGSUFFIX (#### #, .### ## .###) # #####.
```

```
#### ## ##### ## ## ## ## ## ## ## ##
#####.
```

```
#### ## ##### ## ## ## ## ## ## ## ##
##### ## ## #####.
```

```
##### # commit ##  
##### # commit, # ## #####  
#####,## # ## #####, #####  
#####. ## #####  
##### /usr/ports/CHANGES.
```

##### ## ##### ##### #####, ### #####, ##### ##### # portmgr.

####

```
##### # ##### # ##### # #####, # portmgr ### #### ##  
##### ### ##### ## ##### #386™ ## amd64. ##  
#####, ### ##### ##### ##### ## ##### ##  
##### tier-2.
```

```
# portmgr #####
#####
#####.
#####.
```

- ##### ## #: ##### ##### ## 500### ##### ## # #####  
# ##### ## #####.

####

```
### ##### # ##### # ##### # ##### # #####
### #####, # ## ##### ##### # #####
### ##### ## 100% ## ##.
```

- ###: # ##### ####### # 2#; # ##### # ## 8# ## #### .#####  
##### ## ##### #### ##### 512# ## ##.
- #####: # ##### ## ##### ## 20# #### # ##### ## ##### ## ## 32# ####  
## ## swap. # ##### ##### ##### ##### ##### ##### ,  
# ##### geom stripes. ## ##### ## ##### ##### ## ## ##  
#####!



- 13.2. #####

- 13.3. ##### # src

- 24



```
#####  
#####
```

2. ## ##### pxeboot: #####  
#####. ##### /pxeroot,  
##### /pxeroot/\${arch}-\${branch}. ##### DESTDIR.
3. ## #####  
##### (cross-building), ##### TARGET\_ARCH=\${arch}.



####

##### ports #####  
#####.

4. ##### kernel. ##### GENERIC (##, ##  
##### 3.5# ##### #386™, # PAE).

#####:

|         |        |
|---------|--------|
| options | NULLFS |
| options | TMPFS  |

#####:

|         |                       |
|---------|-----------------------|
| options | GEOM_CONCAT           |
| options | GEOM_STRIPE           |
| options | SHMMAXPGS=65536       |
| options | SEMMNI=40             |
| options | SEMMNS=240            |
| options | SEMUME=40             |
| options | SEMMNU=120            |
| options | ALT_BREAK_TO_DEBUGGER |

#### # PAE, #####  
#####  
#####:

|         |              |
|---------|--------------|
| options | COMPAT_LINUX |
| options | LINPROCFS    |

##### # PAE, # 12/09/2011 #####  
#####:

|          |            |                                 |
|----------|------------|---------------------------------|
| nooption | NFSD       | # New Network Filesystem Server |
| options  | NFSCCLIENT | # Network Filesystem Client     |
| options  | NFSSERVER  | # Network Filesystem Server     |



- ### ##### # ##### ## cluster:  
cp -usr/share/zoneinfo/Etc/UTC etc/localtime

- ##### etc/rc.conf #####. (## ##### ##### pxeboot, # ## #####  
#####  
#####  
##### ## ## ##.)

```
hostname="{hostname}"
inetd_enable="YES"
linux_enable="YES"
nfs_client_enable="YES"
ntpd_enable="YES"
ntpdate_enable="YES"
ntpdate_flags="north-america.pool.ntp.org"
sendmail_enable="NONE"
sshd_enable="YES"
sshd_program="/usr/local/sbin/sshd"

gmond_enable="YES"
squid_enable="YES"
squid_chdir="/usr2/squid/logs"
squid_pidfile="/usr2/squid/logs/squid.pid"
```

```
vmware_guest_vmmemctl_enable="YES"
vmware_guest_guestfd_enable="YES"
```

```
hostname=""
ifconfig_em0="DHCP"
fsck_y_enable="YES"

inetd_enable="YES"
linux_enable="YES"
nfs_client_enable="YES"
sendmail_enable="NONE"
sshd_enable="YES"
sshd_program="/usr/local/sbin/sshd"

gmond_enable="YES"
squid_enable="YES"
squid_chdir="/usr2/squid/logs"
squid_pidfile="/usr2/squid/logs/squid.pid"
```

```
#### #####, ##### ##### ##### # ##### # ##### # #####, ##
#### # ### ## # /usr2 ##### (# ### ##### # #####
## #####.) # ##### # ## # #####.
```

- ##### # etc/resolv.conf, ## #####.
- ##### # etc/sysctl.conf:

```
9a10,30
> kern.corefile=/usr2/%N.core
> kern.suid_coredump=1
> #debug.witness_ddb=0
> #debug.witness_watch=0
>
> # squid needs a lot of fds (leak?)
> kern.maxfiles=40000
> kern.maxfilesperproc=30000
>
> # Since the NFS root is static we don't need to check frequently for file changes
> # This saves >75% of NFS traffic
> vfs.nfs.access_cache_timeout=300
> debug.debugger_on_panic=1
>
> # For jailing
> security.jail.sysvipc_allowed=1
> security.jail.allow_raw_sockets=1
> security.jail.chflags_allowed=1
> security.jail.enforce_statfs=1
>
> vfs.lookup_shared=1
```

- ## #####, ##### # etc/syslog.conf ##### # ##### ## logs #####  
@pointyhat.freebsd.org.

#### 13.4. ##### ## ports

1. ##### ## ##### ports:

```
net/rsync
security/openssh-portable (with HPN on)
security/sudo
sysutils/ganglia-monitor-core (with GMETAD off)
www/squid (with SQUID_AUFS on)
```

```
##### ## ##### ## ##### # meta-port, ## ##### ## ##
#####.
```

2. ##### ## ##### ## usr/local/etc/. # ##### ## ##### # ##  
##### ## ## #####, ## ##### # ##  
# pxeboot.

```
#####  
#####
```



####

```
# #####  
#####  
#####  
#####  
#####
```

#####:

- ##### # usr/local/etc/gmond.conf:

```
21,22c21,22  
< name = -"unspecified"  
< owner = -"unspecified"  
---  
> name = -"${arch} package build cluster"  
> owner = -"portmgr@FreeBSD.org"  
24c24  
< url = -"unspecified"  
---  
> url = -"http://pointyhat.freebsd.org"
```

```
## #####  
(##### = ##), #####  
##### (.71, .72, ##).
```

- ##### # usr/local/etc/rc.d/portbuild.sh, ##### # scratchdir:

```
#!/bin/sh  
#  
# Configure a package build system post-boot  
  
scratchdir=/usr2  
  
ln --sf ${scratchdir}/portbuild -/var/  
  
# Identify builds ready for use  
cd -/var/portbuild/${arch}  
for i in */builds/*; do  
    if [ -f ${i}/.ready - ]; then  
        mkdir -/tmp/.setup-${i##*/}  
    fi  
done  
  
# Flag that we are ready to accept jobs  
touch -/tmp/.boot_finished
```

##### ## #####

- ##### # usr/local/etc/squid/squid.conf:

```
288,290c288,290
< #auth_param basic children 5
< #auth_param basic realm Squid proxy-caching web server
< #auth_param basic credentialsttl 2 hours
---
> auth_param basic children 5
> auth_param basic realm Squid proxy-caching web server
> auth_param basic credentialsttl 2 hours
611a612
> acl localnet src 127.0.0.0/255.0.0.0
655a657
> http_access allow localnet
2007a2011
> maximum_object_size 400 MB
2828a2838
> negative_ttl 0 minutes
```

##### ##### # usr/local ##### usr2 ## cache\_dir, access\_log, cache\_log, cache\_store\_log,  
pid\_filename, netdb\_filename, coredump\_dir.

# #####, ##### # ##### ## ##### ## cache\_dir, ## ufs ##### aufs (#  
##### ## #####).

- ##### # ssh: ##### ## ##### ## /etc/ssh ##### /usr/local/etc/ssh # #####  
NoneEnabled yes ## sshd\_config.
- ##### # usr/local/etc/sudoers:

```
38a39,42
>
> # local changes for package building
> %wheel ALL=(ALL) ALL
> ports-${arch} ALL=(ALL) NOPASSWD: ALL
```

### 13.5. ##### ## #####

1. ##### ## ##### port/package ### ##### ##, ### ##, cd /usr2.
2. ##### ## ##:

```
mkdir portbuild
chown ports-${arch}:ports-${arch} portbuild
mkdir pkgbuild
chown ports-${arch}:ports-${arch} pkgbuild
mkdir squid
mkdir squid/cache
mkdir squid/logs
chown --R squid:squid squid
```

```
#####  
#####
```

3. ## ## ##### # ##### ## /var/portbuild ##### ## #####  
#####, ##### ## ##### ##### # /tmp ## #####  
##### ## ##### ## ##### ## (### # script ##  
##### amd64). ##### ## chroots ##### ##  
##### ## ## # /tmp/boot\_finished.
4. ##### # #####.
5. #####, ##### # ##### ## squid:

```
squid --z
```

### 13.6. ##### ## pointyhat

```
##### ##### ## portmgr, ##### # ##### ports-  
${arch}, ## pointyhat.
```

1. ## ##### ## ##### ## ##### (### ##), ##  
##### ## ## ssh ## ## ## cronab.
2. ##### ## ## /home/ports-\${arch}/.ssh/config ##### #  
## ##, # ##, # ##  
#####.
3. ##### # /var/portbuild/\${arch}/clients/bindist-\${hostname}.tar.
  - ##### ## ##### ## ## ## ##  
## ## #####.
  - ##### # etc/resolv.conf ##### # site #####.
  - ##### # etc/make.conf ##### # ##### ## ## ##. ####: #  
##### ## ##### MASTER\_SITE\_BACKUP ##### ## ## ##,  
## # ##### ## MASTER\_SITE\_OVERRIDE ##### ## ## ##  
#####. ## ##:

```
.if defined(FETCH_ORIGINAL)  
MASTER_SITE_BACKUP=  
.else  
MASTER_SITE_OVERRIDE=\  
ftp://friendly-local-ftp-mirror/pub/FreeBSD/ports/distfiles/${DIST_SUBDIR}/\  
ftp://${BACKUP_FTP_SITE}/pub/FreeBSD/distfiles/${DIST_SUBDIR}/  
.endif
```

- ##### ## tar # ## ## ## ##.

##### # ##

####: ##### ## ## ##### ##### #####; ## #####, ## #### ##  
##### ## ##### ##, ##### ##### ## ##### #####  
site (### #####, ## /var/portbuild/conf/clients/) # ##### ## link ##### ##### ##.

4. ##### # /var/portbuild/\${arch}/portbuild-\${hostname} ##### ## ## #####  
#####. # ##### ##### ##### ##### ## ##### ## /var/portbuild/  
\${arch}/portbuild.conf.

##### ## #####:

```
disconnected=1
http_proxy="http://localhost:3128/"
squid_dir=/usr2/squid
scratchdir=/usr2/pkgbuild
client_user=ports-${arch}
sudo_cmd="sudo --H"
rsync_gzip=-z

infoseek_host=localhost
infoseek_port=${tunnelled-tcp-port}
```

##### #####:

```
use_md_swap=1
md_size=9g
use_zfs=1
scp_cmd="/usr/local/bin/scp"
ssh_cmd="/usr/local/bin/ssh"
```

## ##### ##### ##### ## ##### ## portmgr ##### ## root ##  
pointyhat.

1. ##### # ##### ## ##### ## /etc/hosts.allow. (#####, #####  
##### ## ## # ##### ##### ##.)
2. ##### ## ##### data\_source ##### /usr/local/etc/gmetad.conf:

data\_source "arch/location Package Build Cluster" 30 hostname

#### ##### ## gmetad.

### 13.7. ##### # ##

##### ##### ##### ##### ## portmgr ##### ## ports-arch ##  
pointyhat.

1. ##### ## # ssh ##### ##### ssh hostname.



```
#####  
#####
```

```
2. #####  
/var/portbuild/scripts/ #####  
dosetupnode arch major latest hostname. #####  
#####.
```

```
3. ##### telnet hostname portnumber. ##### 414 (#####  
#####) ##### arch  
# osversion; # ##### 8649 ##### XML ## ganglia.
```

```
##### portmgr ##### root ## pointyhat.
```

- ##### # qmanager ##### # ##. ### #####:

```
python path/qmanager/qclient add name=uniquename arch=arch osversion=osversion numcpus=number  
haszfs=0 online=1 domain=domain primarypool=package pools="package all" maxjobs=1 acl="ports-  
arch,deny_all"
```

## 14. ##### branch ## #####

```
##### branch # #####, # #####  
##### branch ##### HEAD. ##  
##### branch anterior:
```

- (#####) ##### # /var/portbuild/conf/server.conf #####
  - ##### *new-branch* ## SRC\_BRANCHES.
  - ##### # branch ## head, ##### # SRC\_BRANCH\_*branch*\_TAG #####  
RELENG\_*branch*\_0.
  - ##### SRC\_BRANCH\_*new-branch*\_TAG=. (#####).
- (#####) ##### # /var/portbuild/updatesnap #####.
- (#####) #####  
## #####:

```
zfs create a/snap/src-branch
```

- (#####): #####  
##### src #####

```
cvs -Rq --d -/r/ncvs co --d src-branch-r RELENG_branch
```

- (#####): ##### Tools/  
portbuild/portbuild.conf.
- (#####): #####  
##### # /var/portbuild/arch/portbuild.conf.

```
##### ## branch ### ##### ## ###
##### #####
```

- (##### ##### # ##### ##### #): ##### # /var/portbuild/scripts/buildenv.
- (##### ##### # ##### ##### #): ##### ## link ##### ## # /var/portbuild/scripts/dopackages ##### /var/portbuild/scripts/dopackages.branch.
- (##### ##### # ##### ##### #): ##### ## ##### HEAD\_BRANCH # NON\_HEAD\_BRANCHES ## ##### /var/portbuild/scripts/updatesnap.
- (##### ##### # ##### ##### #): ##### # ##### snap ## ##### /var/portbuild/scripts/zexpire.
- (##### ##### # ##### ##### #): ##### ## links ##### ## ##### ## ##### ## /var/portbuild/errorlogs/;

```
ln -s ../arch/branch/builds/latest/bak/errors arch-branch-full
ln -s ../arch/branch/builds/latest/bak/logs arch-branch-full-logs
ln -s ../arch/branch/builds/latest/errors arch-branch-latest
ln -s ../arch/branch/builds/latest/logs arch-branch-latest-logs
ln -s ../arch/branch/builds/latest/bak/packages arch-branch-packages-full
ln -s ../arch/branch/builds/latest/packages arch-branch-packages-latest
```

- ##### # ##### # branch #####:

build create *arch branch*

- ##### # bindist.tar.

```
15. ##### ## branch ### ##### ## ## #####
#####
```

```
##### ## branch ##### ##### ## ### #####, ##### ##### ##### # #####
##### ##### ##### ##### ##### ##### #####.
```

- (#### #####) ##### # /var/portbuild/conf/server.conf # #### ## ##### #####:
  - ##### # *old-branch* ## ##### SRC\_BRANCHES.
  - ##### # SRC\_BRANCH\_*old-branch*\_TAG =whatever
- (#### # ##### ##### #####): umount a/snap/src-old-branch/src; umount a/snap/src-old-branch; zfs destroy -r a/snap/src-old-branch
- (#### # ##### ##### #####) ##### ##### ## #####  
##### # links ##### ## /var/portbuild/errorlogs/ # ##### ## ## #####:
  - ##### ##### \*-old\_branch-failure.html
  - ##### ##### buildlogs \*-old\_branch-\*-logs.txt

#####  
#####

- Links ##### \*-old\_branch-previous\*
- Links ##### \*-old\_branch-latest\*

## 16. ##### #####

##### 2011 # #####  
##### *na versão mais antiga suportada* ## branch. ## #####: ## # RELENG-8  
## #####: 8.1, 8.2, 8.3; ##### # packages-8-stable #####  
##### 8.1.

##### (End-Of-Life, ##### # [#####](#)), ##  
##### (#####!) #####  
#####.

#####:

- ##### # /var/portbuild/conf/server.conf # #####:
  - ##### # SRC\_BRANCH\_branch\_TAG ##### RELENG\_branch\_N ## # N # #####  
#####.
  - ##### # /var/portbuild/updatesnap #####.
  - ##### # dopackages ## # ##### -nobuild.
  - ##### # [#####](#).
  - ##### # dopackages ## # ##### -nobuild.
- #####

## 17. #####



####

## #####

- ##### ports-arch.
- `mkdir -/var/portbuild/arch`

#### #####

- #### ## ##### ## ##### ##:

```
zfs create --o mountpoint=/a/portbuild/arch a/portbuild/arch
```

- chown ports-arch:portmgr -/var/portbuild/arch;  
chmod 755 -/var/portbuild/arch;  
cd -/var/portbuild/arch

- #### # ##### # ##### .ssh.

- #### ## ##### ## logs ## ##### # #### ## logs ## #####:

```
mkdir -/dumpster/pointyhat/arch/archive
```



####

```
# ##### ## /dumpster/pointyhat ## ##### #####  
#####. ##### ##, ##### # #####  
/dumpster/pointyhat/arch/archive # #### ## link ##### ##.  
(##### ##.)
```

- #### ## link #### # ##### ## ## ## ##:

```
ln --s -/dumpster/pointyhat/arch/archive archive
```



####

```
## ##### ## ## ## ## ##  
# ##### ports-arch.
```

- ## ##### /var/portbuild/arch #####:

```
mkdir clients
```

- ##### # ##### clients #### ## #####.

- mkdir loads

- mkdir lockfiles

- #### ## make.conf #####. ## ##### ## ## ##:

```
#####  
#####
```

```
ln -./make.conf -./make.conf
```

- ##### mlist.
- (#####  
#####):

```
cc pnohang.c --o pnohang-arch
```

- ##### portbuild.conf # #####  
#####.
- ##### portbuild.machinename.conf #####.

```
cd -.ssh && ssh-keygen
```

- ##### .ssh/config #####
- #####:

```
mkdir -/var/portbuild/conf/arch
```

- ##### scripts dotunnel.\* #####.



```
#####  
#####:
```

- #####:

```
python path/qmanager/qclient add_acl name=ports-arch uidlist=ports-arch gidlist=portmgr sense=1
```

- (#####  
SUPPORTED\_ARCHS ##### /var/portbuild/arch/server.conf.
- (#####  
##### /var/portbuild/scripts/buildenv.
- ##### arch ##### /var/portbuild/scripts/zbackup # # /var/portbuild/scripts/zexpire.
- #####  
##### branch: ##### links ##### /var/portbuild/  
errorlogs/:

```
ln --s -./arch/branch/builds/latest/bak/errors arch-branch-full
```

```
#### ##### ## ## ##  
(##### ## #####)
```

```
In --s ../arch/branch/builds/latest/bak/logs arch-branch-full-logs  
In --s ../arch/branch/builds/latest/errors arch-branch-latest  
In --s ../arch/branch/builds/latest/logs arch-branch-latest-logs  
In --s ../arch/branch/builds/latest/bak/packages arch-branch-packages-full  
In --s ../arch/branch/builds/latest/packages arch-branch-packages-latest
```

- ##### links ##### # ##### ## ##### /var/  
portbuild/errorlogs/:

```
In --s ../arch/archive/buildlogs arch-buildlogs  
In --s ../arch/archive/errorlogs arch-errorlogs
```



####

##### ports-arch:

- ##### branch ## ## ##, ##### # #####:
- ##### # ##### # branch ##:

```
build create arch branch
```

- ##### # bindist.tar.



####

### ##### # ##### # #####:

- (##### ## ## ## ##): ## ## ## # #####  
##### ## ##### ## ## ## ##: ##### # #####  
## /var/portbuild/scripts/dopackagestats.
- ##### ## ## ## arch ##### # ## /var/portbuild/scripts/dologs ## crontab ##  
##### ##. (### # ## #####)

18. ##### ## ## ## (#####  
## #####)

#####.

### ##, ##### # ## ##### ## #####.

```
#####  
#####
```

---

### 18.1. #####

- #####.
- ##### ports-\$(arch).  
##### wheel. ##### 's' #####.  
#####, # ##### ports # portmgr.
- ##### # /home/ports-\$(arch)/.ssh/ # ##### #  
authorized\_keys.
- ##### # /etc/.ssh/.
- ##### # /boot/loader.conf:  

```
console="vidconsole,comconsole"
```
- ##### # /etc/sysctl.conf:  

```
kern.maxfiles=40000  
kern.maxfilesperproc=38000
```
- ##### # /etc/ttys:  

```
ttyu0  -"/usr/libexec/getty std.9600"  vt100  on secure
```
- #####.

### 18.2. #####

- ##### a # # /a:  

```
# zpool create a mirror da1 da2 mirror da3 da4 mirror da5 da6 mirror da7 da8
```
- ##### portbuild:  

```
# mkdir -p -/a/portbuild  
# cd -/a/portbuild  
# chown portmgr:portmgr -.  
# chmod 775 -.
```
- #####.

### 18.3. ##### src

- #####.

### 18.4. ##### ports

- ##### ports (#####) #####:  

```
databases/py-pysqlite23
```

#####

```
databases/py-sqlalchemy
devel/git (WITH_SVN)
devel/py-configobj
devel/py-setuptools
devel/subversion
net/nc
net/rsync
sysutils/ganglia-monitor-core (with GMETAD off)
sysutils/ganglia-webfrontend (WITHOUT_X11)
www/apache22 (with EXT_FILTER and THREADS)
```

## ##### ##### ##### #####:

```
databases/sqlite3
lang/perl-5.12
lang/python27
```

## ##### ports (## ##### #####) ## #####  
#####:

```
benchmarks/bonnie++
devel/ccache
mail/postfix
net/isc-dhcp41-server
ports-mgmt/pkg_cutleaves
ports-mgmt/pkg_tree
ports-mgmt/portaudit
ports-mgmt/portmaster
security/sudo
shells/bash
shells/zsh
sysutils/screen
sysutils/smartmontools
```

2. ##### # ##### ##### # #####: (##### # ### #####).

18.5. #####

- ##### # ### #####.

19. ##### ##### ##### ##### ## #####

##### ## ##### ## ## ##### ## ##### (### #####, ## panic ##### # ##### ##  
#####, ##.), ##### ##### ## ##### #####:

- ##### # ##### # # ##### ## ##### (### #####, ##### ##### ## ##### ## ##  
#####) ## /var/portbuild/\${arch}/reboots
- ##### ## ##### ##### #386, ##### # ##### ##### # ##### /SCRUB ## nfsroot (##  
#####, /a/nfs/8.dir1/SCRUB) # #####. ##### ## ##### ## dd if=/dev/zero of=/dev/ad0 #



##### # ##### # ##### ##### ## ##### ##### ##### #, ####  
## ## ##### ##### ##### ##### #####. #### # ## ##### #####  
#### ##### # ##### ## #### # #### ##### ## ##### ## ## ##### ##  
## #####.



####

```
##### blade #386, #####  
# ##### # blade ##### # #####  
##### ##, #####.
```

```
##### ## ##### ##### ## ##### ## ## ##### ## ##### ## #####
##### ## ##### ## ##### (## #####, ## ##### ##64) #####
##### ## ## #####.
```

- `## # #####, ##### # #####. #####  
# ##### # mlist # (#### #) ##### # smartcl ## #####:`

```
smartctl --t long -/dev/ad0
```

#### ### ##### ##### ## 30 #####:

```
gohan51# smartctl --t long -/dev/ad0
smartctl version 5.38 [i386-portbld-freebsd8.0] Copyright (C) 2002-8
Bruce Allen
Home page is http://smartmontools.sourceforge.net/
```

===== START OF OFFLINE IMMEDIATE AND SELF-TEST SECTION =====

Sending command: -"Execute SMART Extended self-test routine immediately in off-line mode".  
Drive command -"Execute SMART Extended self-test routine immediately in off-line mode" -  
successful.

Testing has begun.

Please wait 31 minutes for test to complete.

Test will complete after Fri Jul 4 03:59:56 2008

Use `smartctl --X` to abort test.

```
##### # ##### ##### #####, ##### # ##### smartctl -a /dev/ad0 ####
##### # ##### ## #####:
```

```
# SMART Self-test log structure revision number 1
# Num Test_Description      Status              Remaining
LifeTime(hours) LBA_of_first_error
# 1 Extended offline    Completed: read failure     80%    15252   319286
```

```

##### ##### ##### ##
#####
### ##### #####, ##### ## log ### ##### ##### ##
#####. # ##### # ##### ##### ## ## ##### ## #####
##### ## ##### (### ##### ## ##### ## #####).

##### ## #####, ### #####, ##### ## ##### ## cluster, ### ##
#####.

```