

Plateforme Universitaire
de déploiement
de systèmes FreeBSD

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cvsup.fr.freebsd.org



open-projects



mkpkg



pkgftp

cvsupd



site 1



site 2



Description

Chaque nuit « cvsupd » est synchronisé sur « cvsup.fr.freebsd.org ».

Humainement nous effectuons un portupgrade sur les packages installés sur « mkpkg », notre master.

Nous en portinstallons de nouveaux à la demande.

Quand cela est terminé, les dépôts cvsup et package sont mis à jour sur « pkgftp ».

Enfin les machines se trouvant sur les sites 1 et 2 peuvent cvsupdate leurs arborescences de port et portupgrader leurs packages depuis « pkgftp ».

create_all_pkg.sh

```
#!/bin/sh
```

```
PKGDIR=/home/ftp/pub/pkg
```

```
rm -rf $PKGDIR/*
```

```
list-deps () {
```

```
    pkg_info > $PKGDIR/result
```

```
    DEPS=`awk '{print \$1}' $PKGDIR/result`
```

```
    rm -f $PKGDIR/result
```

```
    return
```

```
}
```

create_all_pkg.sh

```
create-pkg () {  
    if [ $# -eq 0 ]  
    then  
        echo "Usage create-pkg pkg-name";  
        exit 1;  
    fi  
    cd $PKGDIR  
    pkg_create -b $1 $1.tbz  
    return  
}
```

create_all_pkg.sh

```
list-deps
```

```
for PKG in $DEPS
```

```
do
```

```
  if [ ! -f $PKGDIR/$PKG.tbz ]
```

```
  then
```

```
    echo "$PKG...[BUILDING]"
```

```
    create-pkg $PKG
```

```
  else
```

```
    echo "$PKG...[EXIST]"
```

```
  fi
```

```
done
```

sysinstall Main Menu

Welcome to the FreeBSD installation and configuration tool. Please select one of the options below by using the arrow keys or typing the first character of the option name you're interested in. Invoke an option with [SPACE] or [ENTER]. To exit, use [TAB] to move to Exit.

Usage	Quick start - How to use this menu system
Standard	Begin a standard installation (recommended)
Express	Begin a quick installation (for experts)
Custom	Begin a custom installation (for experts)
Configure	Do post-install configuration of FreeBSD
Doc	Installation instructions, README, etc.
Keymap	Select keyboard type
Options	View/Set various installation options
Fixit	Repair node with CDROM/DVD/floppy or start shell
Upgrade	Upgrade an existing system
Load Config	Load default install configuration
Index	Glossary of functions

[**Select**] X Exit Install

[Press F1 for Installation Guide]

sysinstall Main Menu

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sysinstall Main Menu

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- Usage Quick start - How to use this menu system
- Standard Value Required
- Express Specify the name of a configuration file residing on a MSDOS or UFS floppy.
- Custom
- Configure
- Doc
- Keymap
- Options
- Fixit
- Upgrade Upgrade an existing system
- Load Config Load default install configuration
- Index Glossary of functions

install.cfg

[OK] Cancel

[Select] X Exit Install

{ Press F1 for Installation Guide }

Install.cfg

```
tryDHCP=YES
debug=yes
nonInteractive=YES
noConfirm=YES
noWarn=NO
#####
hostname=jumstart
#####
disk=ad0
partition=all
bootManager=standard
diskPartitionEditor
#####
ad0s1-1=ufs 4096000 /
ad0s1-2=swap 1015808 none
ad0s1-3=ufs 4096000 /var
ad0s1-4=ufs 0 /usr 1
diskLabelEditor
#####
dists=base manpages
distSetCustom
netDev=em0
_ftpPath=ftp://open-projects.univ-mlv.fr/pub/FreeBSD/
mediaSetFTP
#####
installCommit
```

pkg-install.sh

```
#!/bin/sh
_REPOSITORY=ftp://open-projects.univ-mlv.fr/pub/FreeBSD
_PKG_PATH_REMOTE="$_REPOSITORY/5.3/All"
_PKG_LIST_FILE="pkg-list"
_PKG_LIST_PATH_LOCAL="/tmp/$_PKG_LIST_FILE"
_PKG_LIST_PATH_REMOTE="$_REPOSITORY/5.3/$_PKG_LIST_FILE"
_PKG_CLIENT_LIST_FILE="pkg_client.list"
_PKG_CLIENT_LIST_PATH_LOCAL="/tmp/$_PKG_CLIENT_LIST_FILE"
_PKG_CLIENT_LIST_PATH_REMOTE="$_REPOSITORY/abo-math/$_PKG_CLIENT_LIST_FILE"
```

pkg-install.sh

```
echo "Starting script at:" `date`
```

```
echo "Fetching repository package listing file"
```

```
echo " from $_PKG_LIST_PATH_REMOTE"
```

```
echo " to $_PKG_LIST_PATH_LOCAL"
```

```
echo fetch -v -o "$_PKG_LIST_PATH_LOCAL" "$_PKG_LIST_PATH_REMOTE"
```

```
echo "done"
```

```
echo "Fetching client package listing file"
```

```
echo " from $_PKG_CLIENT_LIST_PATH_REMOTE"
```

```
echo " to $_PKG_CLIENT_LIST_PATH_LOCAL"
```

```
echo fetch -v -o "$_PKG_CLIENT_LIST_PATH_LOCAL" "$_PKG_CLIENT_LIST_PATH_REMOTE"
```

```
echo "done"
```

```
awk -v PKG_LIST_PATH_LOCAL=$_PKG_LIST_PATH_LOCAL \
```

```
    -v PKG_PATH_REMOTE=$_PKG_PATH_REMOTE \
```

```

' function version(pkg) {
    cmd = "grep -e " pkg " " PKG_LIST_PATH_LOCAL
    cmd | getline _version
    close(cmd)
    return _version
}
function install(pkg) {
    cmd = "pkg_add "PKG_PATH_REMOTE"/"pkg".tbz"
    system(cmd)
}
BEGIN {
    print "Begining packages installation"
}
/^PKG_/ {
    split($0,pkg_name,"=");
    v=version(pkg_name[2]);
    print "Identified",pkg_name[1],"=",v
    install(v)
}
/^#/ { next }
END {
    print "Ending packages installation"
}' $_PKG_CLIENT_LIST_PATH_LOCAL
echo "Ending script at:" `date`

```

pkg_client.list

- PKG_XORG="^xorg-[0-9.,_h]*\$"
- PKG_KDE="^kde-[0-9.,_h]*\$"
- PKG_GNOME="^gnome2-[0-9.,_h]*\$"
- PKG_XFCE4="^xfce-[0-9.,_h]*\$"
- PKG_TETEX="^teTeX-[0-9.,_h]*\$"
- PKG_KILE="^kile-[0-9.,_h]*\$"
- PKG_PROSPER="^prosper-[0-9.,_h]*\$"
- PKG_OPENOFFICE="^openoffice-[0-9.,_h]*\$"
- PKG_CVSUP="^cvsup-without-gui-[0-9.,_h]*\$"
- PKG_PORTUPGRADE="^portupgrade-[0-9.,_h]*\$"
- PKG_SCREEN="^screen-[0-9.,_h]*\$"
- PKG_ENSCRIPT="^enscript-a4-[0-9.,_h]*\$"
- PKG_VIM="^vim-[0-9.,_h]*\$"
- PKG_XEMACS="^xemacs-[0-9.,_h]*\$"
- PKG_THUNDERBIRD="^thunderbird-[0-9.,_h]*\$"
- PKG_FIREFOX="^firefox-[0-9.,_h]*\$"
- PKG_JAVA="^jdk-[0-9.,_p]*\$"
- PKG_PLUGIN="^linuxpluginwrapper-[0-9.]*\$"
- PKG_MTOOLS="^mtools-[0-9.]*\$"
- PKG_NSSLDAP="^nss_ldap-[0-9.]*\$"
- PKG_PAMLDAP="^pam_ldap-[0-9.]*\$"
- PKG_SCILAB="^scilab-[0-9_]*\$"

pkg-list

- 3dm-2.03.00.028,1
- ImageMagick-6.2.2.1
- ORBit-0.5.17_2
- ORBit2-2.12.4
- OpenEXR-1.2.2
- Sablot-1.0.2
- WordNet-2.0
- Xaw3d-1.5E_1
- a2ps-a4-4.13b_3
- aalib-1.4.r5_1
- acroread-5.10_2,1
- acroread7-7.0.1
- amspsfnt-1.0_3
- apache-ant-1.6.5_1
- apr-nothr-db4-1.0.1_1
- arts-1.4.2,1
- ...

Client CVSup

- port-supfile

*default host=open-projects.univ-mlv.fr

*default base=/var/db

*default prefix=/usr

*default release=cvs tag=.

*default delete use-rel-suffix

*default compress

ports-all

Portupgrade

On configure l'usage de notre propre dépôt de packages dans [/usr/local/etc/pkgtools.conf](#)

...

```
PKG_SITES = [ sprintf('ftp://open-  
projects.univ-  
mlv.fr/pub/FreeBSD/5.3/All') ] ...
```

Evolution depuis !Mathrice -1

- Support des architectures i386 et amd64 (pour les serveurs)
- Utilisation de portsnap a la place de cvsup
- La creation et le déploiement des packages est une opération complexe et chronophage.
- Déploiements initial des clients par `CLIO-installer`.
Maj eventuelle par portupgrade -PPRrua
- Déploiements des serveurs par `CLIO-installer`

† cvsup

- L'usage de cvsup est ~complexe et lent.
- Il est difficile de maintenir un référentiel != pour deux architectures.
- Les packages i386 et amd64 ne sont pas forcément au même niveau. ex: java.

portsnap

- Inclus dans la base depuis FreeBSD 6.0 pour les m-a-j de la portree.
- M-a-j signées.
- Transfert des patchs (bcp de petits fichiers) par pipelined HTTP 1.1. cf <http://www.daemonology.net/portsnap/>
- C'est du HTTP donc pas besoin de mettre en place une infrastructure cvsup/cvs-mirror.

Portsnap vs cvsup

```
# uname -a
```

```
FreeBSD ssh-math.univ-mlv.fr 6.0-RELEASE FreeBSD 6.0-RELEASE #0: Thu Nov  
10 04:00:56 UTC 2005 adminmath@:/usr/obj/usr/src/sys/SMP amd64
```

```
ssh-math# date;portsnap fetch update;date
```

```
Mon Mar 13 12:04:19 CET 2006
```

```
Looking up portsnap.FreeBSD.org mirrors... using portsnap2.FreeBSD.org.
```

```
Fetching snapshot tag... done.
```

```
Fetching snapshot metadata... done.
```

```
Updating from Fri Mar 10 08:47:07 CET 2006 to Mon Mar 13 11:44:15 CET 2006.
```

```
Fetching 4 metadata patches... done.
```

```
Applying metadata patches... done.
```

```
Fetching 0 metadata files... done.
```

```
Fetching 29 patches.....10....20.... done.
```

```
Applying patches... done.
```

```
Fetching 0 new ports or files... done.
```

```
Removing old files and directories... done.
```

```
Extracting new files:
```

Portsnap vs cvsup

- /usr/ports/Tools/portbuild/
 - /usr/ports/UPDATING
 - /usr/ports/audio/libao/
 - /usr/ports/audio/sbagen/
 - /usr/ports/cad/calculix/
 - /usr/ports/converters/ascii2binary/
 - /usr/ports/deskutils/plans/
 - /usr/ports/devel/cvs2cl/
 - /usr/ports/devel/libast/
 - /usr/ports/devel/portlint/
 - /usr/ports/japanese/scim-prime/
 - /usr/ports/japanese/scim-skk/
 - /usr/ports/mail/p5-Mail-Tools/
 - /usr/ports/mail/postfix-policyd-sf/
 - /usr/ports/math/taucs/
 - /usr/ports/misc/kcd-devel/
 - /usr/ports/misc/kcd/
 - /usr/ports/multimedia/p5-GStreamer/
 - /usr/ports/multimedia/vcdimager/
 - /usr/ports/net/cnet/
 - /usr/ports/net/xbms/
 - /usr/ports/print/acroread7/
 - /usr/ports/security/dirmngr/
 - /usr/ports/security/vuxml/
 - /usr/ports/shells/rssh/
 - /usr/ports/sysutils/kdeadmin3/
 - /usr/ports/textproc/rast/
 - /usr/ports/www/validator/
 - /usr/ports/x11-toolkits/v/
- Building new INDEX files... done.
Mon Mar 13 12:04:27 CET 2006
ssh-math#

Portsnap vs cvsup

```
# uname -a
```

```
FreeBSD mkpkg-math.univ-mlv.fr 6.0-RELEASE FreeBSD 6.0-RELEASE #0: Mon Nov  
14 12:13:38 CET 2005 root@umr8050f43.univ-mlv.fr:/usr/obj/usr/src/sys/SMP  
i386
```

```
# date >> cvsup.out ;cvsup -L2 port-supfile >>cvsup.out;date >> cvsup.out
```

```
Mon Mar 13 12:27:00 CET 2006
```

```
Parsing supfile "port-supfile"
```

```
Connecting to cvsup.fr.FreeBSD.org
```

```
Connected to cvsup.fr.FreeBSD.org
```

```
Server software version: SNAP_16_1h
```

```
Negotiating file attribute support
```

```
Exchanging collection information
```

```
Establishing multiplexed-mode data connection
```

```
Running
```

```
Updating collection ports-all/cvs
```

```
Edit ports/MOVED
```

```
Add delta 1.930 2006.03.05.14.06.25 nork
```

```
Add delta 1.931 2006.03.07.07.14.31 knu
```

```
Edit ports/Tools/portbuild/scripts/buildscript
```

```
Add delta 1.26 2006.03.13.03.04.07 kris
```

```
Edit ports/Tools/portbuild/scripts/claim-chroot
```

```
Add delta 1.7 2006.03.13.03.04.37 kris
```

Portsnap vs cvsup

...

Edit ports/x11-wm/enlightenment/Makefile

Add delta 1.91 2006.03.06.20.24.05 kris

Edit ports/x11-wm/epiwm/Makefile

Add delta 1.7 2006.03.07.08.28.04 ade

Edit ports/x11-wm/epplets/Makefile

Add delta 1.29 2006.03.07.08.28.04 ade

Edit ports/x11-wm/icepref/Makefile

Add delta 1.19 2006.03.07.08.28.04 ade

Edit ports/x11-wm/qvwm/Makefile

Add delta 1.49 2006.03.07.08.28.05 ade

Edit ports/x11-wm/wmDeskGuide/Makefile

Add delta 1.6 2006.03.07.08.28.05 ade

Edit ports/x11-wm/wmg/Makefile

Add delta 1.23 2006.03.07.08.28.05 ade

Edit ports/x11-wm/wmthemeinstall/Makefile

Add delta 1.13 2006.03.07.08.28.05 ade

Edit ports/x11-wm/xfce/Makefile

Add delta 1.78 2006.03.07.08.28.06 ade

Shutting down connection to server

Finished successfully

Mon Mar 13 13:07:43 CET 2006

CLIO-installer

- <espace détente>pourquoi CLIO? Parce que c'est un nouvel installateur fondé sur rsync... </espace détente>
- Besoin initial: déploiement simple et rapide de nos serveurs NAS à mémoire flash + clients légers.
- √ Installation+configuration des 'templates' de machines dans des chroots avant déploiement.
- √ Déploiements ghost-like.
- √ Installateur PXE ou CDROM.

Make.conf

```
CFLAGS=-Os -march=i486 -m386 -pipe
NO_CPU_CFLAGS=true
COPTFLAGS= -Os -march=i486 -pipe
NO_CPU_COPTFLAGS=true
BOOTWAIT=0#NO_DICT          (bool) Set to not build the Webster dictionary files.
NO_DICT=true
NO_BIND=true
NO_BLUETOOTH=true
NO_CXX=true
#NO_BOOT                    (bool) Set to not build the boot blocks and loader.
NO_CVS=true
...
NO_ATM=true
NO_USB=true
#NO_MAN                     (bool) Set to not build manual pages.
#NO_MAN=true
...
#NO_TCSH                    (bool) Set to not build and install /bin/csh (which is tcsh(1)).
#NO_TCSH=true
#NO_GAMES                   (bool) Set to not build games.
NO_GAMES=true
#NO_INFO                    (bool) Set to not make or install info(5) files.
NO_INFO=true
#NO_PROFILE                 (bool) Set to avoid compiling profiled libraries.
NO_PROFILE=true
#NO_SHARE (bool) Set to not build in the share subdir.
#NO_SHARE=true
NO_X=true
NO_RADIUS=true
NO_VINUM=true
LOADER_TFTP_SUPPORT= YES
DOC_LANG=en_US.ISO8859-1
```

CLIO-server

```
setenv SYSROOT /mnt/flash_nas/  
mkdir $SYSROOT  
cd /usr/src make -j4 buildworld  
make installworld DESTDIR=$SYSROOT  
make buildkernel  
cp /usr/src/sys/i386/conf/GENERIC.hints $SYSROOT /  
boot/device.hints  
make installkernel DESTDIR=$SYSROOT  
cd /usr/src/etc  
make distribution DESTDIR=$SYSROOT
```

Ajout des paquets dans le chroot

```
setenv SYSROOT /mnt/flash_nas/  
setenv PACKAGESITE  
  ftp://open-projects.univ-mlv.fr/pub/FreeBSD/local/packages/6.0/i3  
cd $SYSROOT/tmp  
pkg_add -v -r -C $SYSROOT 3dm-2.04.00.014,1.tbz  
pkg_add -v -r -C $SYSROOT nss-3.11.tbz  
pkg_add -v -r -C $SYSROOT nss_ldap-1.244.tbz  
pkg_add -v -r -C $SYSROOT openssh-portable-4.3.p2_1,1.tbz  
pkg_add -v -r -C $SYSROOT pv-0.9.2.tbz  
pkg_add -v -r -C $SYSROOT screen-4.0.2_3.tbz  
pkg_add -v -r -C $SYSROOT rsnapshot  
pkg_add -v -r -C $SYSROOT syslog-ng
```

Listing des paquets chrootés

```
# cat flash_info
setenv PKG_DBDIR /mnt/flash_nas/var/db/pkg
pkg_info
unsetenv PKG_DBDIR
# csh flash_info
3dm-2.04.00.014,1
    3ware RAID controller monitoring daemon and web server
nss-3.11
    Libraries to support development of security-enabled applic nss_ldap-
    1.244 RFC 2307 NSS module
openldap-client-2.2.30
    Open source LDAP client implementation
openssh-portable-4.3.p2_1,1
    The portable version of OpenBSD's OpenSSH
openssl-stable-0.9.7i
    SSL and crypto library perl-5.8.8 Practical Extraction and Report
    Language pv-0.9.2 A pipe throughput monitor
rsnapshot-1.2.1
    Filesystem snapshot utility based on rsync(1)
rsync-2.6.6
    A network file distribution/synchronization utility
syslog-ng-1.6.8
    A powerful syslogd replacement
```

Tips

pour supprimer le repertoire racine du chroot

```
chflags -R noschg /mnt/flash_nas/ &&  
rm -Rf /mnt/flash_nas/.
```

CLIO-installer

- Boot du cd
- Choix de l'interface réseau -> config DHCP
- user@ip du serveur rsync+ssh:
install@10.1.0.1
- Choix du path du chroot sur le serveur (ex: /mnt/chroot/thinbsd/, /mnt/chroot/nas/)
- reboot

remerciements

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