FreeBSD ports system

dv

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前情提要

有來上次社課的話

應該已經裝好一個自己的 FreeBSD 了

前情提要 (cont'd)

沒有自己的 FreeBSD 可以用的話

馬上舉手 o.o/

(我們有備好虛擬機可以用)

前情提要 (cont'd)

現在請先開好自己的 FreeBSD

說明

以下投影片中

開頭的都是指令

說明 (cont'd)

在修改系統設定檔、安裝軟體時

需要 root 權限

\社課正式開始/

一般軟體安裝

Click, Click, Click

FreeBSD 軟體安裝

use command !!!

ports tree

ports tree 是 FreeBSD 上的 軟體列表

而且是有經過檢驗的

而放在裡面的軟體就被稱為 ports

ports tree (cont'd)

接下來將教你如何藉由 ports tree 來安裝軟體

ports tree (cont'd)

Ports tree is what you need before installing ports

Path: **/usr/ports/**

ports tree (cont'd)

請先 cd 進去 **/usr/ports/** 看看裡面是不是空的

如果你安裝時沒有勾選 ports 的話
應該是空的

現在來教如何抓 ports tree ~

portsnap

更新、管理 ports tree 的工具

portsnap (cont'd)

First time

 # edit   /etc/portsnap.conf

SERVERNAME=portsnap.FreeBSD.org

↓

SERVERNAME=portsnap.tw.FreeBSD.org

portsnap (cont'd)

First time

portsnap fetch

portsnap extract

merge => # portsnap fetch extract

portsnap (cont'd)

After the first use

portsnap fetch
portsnap update

merge => # portsnap fetch update

Search - whereis

whereis NAME

whereis rsync
rsync: /usr/ports/net/rsync

Search - echo

(using wildcard)

echo /usr/ports/*/NAME

echo /usr/ports/*/rsync
/usr/ports/net/rsync

echo /usr/ports/*/*NAME*

INDEX

make fetchindex

(the files are **INDEX-*)**

For **make search** & **make quicksearch**

Search - make search

cd /usr/ports/

make search name=NAME

make search key=KEYWORD

If names or keywords have multiple words, use ' ' or " "

Search - make search (cont'd)

Port: rsync-3.0.9_3

Path: /usr/ports/net/rsync

Info: Network file distribution/synchronization utility

Maint: ehaupt@FreeBSD.org

B-deps:

R-deps:

WWW: http://rsync.samba.org/

B-deps

B-deps means **Build dependencies**

R-deps

R-deps means **Run dependencies**

Search - make quicksearch

cd /usr/ports/
make quicksearch name=NAME

Port: rsync-3.0.9_3

Path: /usr/ports/net/rsync

Info: Network file distribution/synchronization utility

Search - psearch

ports-mgmt/psearch

psearch NAME

psearch rsync
net/rsync   Network file distribution...

in the ports

請先 cd 到 /usr/ports/security/sudo

in the ports (cont'd)

- Makefile

- distinfo - info about files and checksums

- files/ - some patches and files

- pkg-descr - more descriptions

- pkg-plist - all files that port will install

in the ports (cont'd)

other files

- pkg-message - msg to user (after installed)

Before getting the source

 # edit   /etc/make.conf

MASTER_SITE_BACKUP?= \

   http://freebsd.cs.nctu.edu.tw/distfiles/${DIST_SUBDIR}/

MASTER_SITE_OVERRIDE?= ${MASTER_SITE_BACKUP}

make

cd /path/to/your/ports

make

make install

make clean

merge => # make install clean

make (cont'd)

make deinstall

delete software anyway even if it is required by other packages

make (cont'd)

change config again
make config

make your make faster

 # edit   /etc/make.conf

FORCE_MAKE_JOBS=yes
MAKE_JOBS_NUMBER=6

portmaster

ports-mgmt/portmaster

portmaster PORTS_PATH

ex:
 # portmaster security/sudo

portmaster (cont'd)

check upgrade (all installed software)
portmaster -a

portmaster (cont'd)

- **-a** 確認所有的ports有沒有可以升級的
- **-d** 升級或移除ports的時候自動將用不到的distfiles砍掉
- **-B** 升級時, 不將舊的套件備份起來
- **-f** 強制編譯升級ports

ex:

    # portmaster -dB security/sudo

portmaster (cont'd)

- -G 不跳出 make config 選擇視窗
- -y 對所有問題都回答yes
- --clean-distfiles 移除不需要的distfiles
- --clean-packages 移除不需要的packages
- --check-depends 確認目前所有的ports相依性

ports & package

ports

- Build from source

- Install slower than package, but run faster

- more flexibility
- easier to modify code

package

- Install faster, but run slower (binary)

- less flexibility

- save the time building from source

pkg_add, pkg_delete

pkg_add LOCAL_PACKAGE_FILES

pkg_add -r PACKAGE_NAME   (remote)

pkg_add, pkg_delete (cont'd)

pkg_delete NAME-VERSION

pkg_delete need specific version

pkg_add, pkg_delete (cont'd)

pkg_delete NAME*

pkg_add, pkg_delete (cont'd)

pkg_delete -r -v PACKAGE_NAME

- -r : Recursive removal
- -v : Turn on verbose output

- -f : force

pkgng

ports-mgmt/pkg

a replacement for pkg_* tools

convert the package database
pkg2ng   (This step is not reversible)

pkgng (cont'd)

pkg install NAME

pkg delete NAME

pkgng (cont'd)

earlier than FreeBSD 10.X require this line in
/etc/make.conf

WITH_PKGNG = YES

pkgng notice

不要在使用 pkg2ng 來轉成使用 pkgng 前

在 make.conf 加入 WITH_PKGNG = YES

Other command

list and describe installed packages
pkg_info
pkg info   (pkgng)

Other command (cont'd)

compares the package version to the
  current version found in the ports tree

pkg_verson
pkg version   (pkgng)

Rehash

rehash

Updating

check /usr/ports/UPDATING

it documents some of the problems you may encounter when upgrading your ports

Updating (cont'd)

\# pkg_updating

\# pkg updating (pkgng)

\# pkg_updating NAME_OF_SOFTWARE

\# pkg updating NAME_OF_SOFTWARE (pkgng)

print the ${PORTSDIR}/UPDATING entries that concern your installed packages

Updating (cont'd)

list installed software and search for updates

portmaster -L

upgrade all ports that can be upgraded

portmaster -a

Portaudit

ports-mgmt/portaudit

check if installed ports are listed in a
    database of published security vulnerabilities

Portaudit (cont'd)

portaudit -Fda

portaudit

- -F Fetch the current database
- -d Print the creation date of the database
- -a Print a vulnerability report for all installed packages

pkg audit

Fetch the database before checking
pkg audit -F
pkg audit

● -F Fetch the database

Task Today

install below software

- screen
- vim-lite
- sudo
- subversion
- git
- python

Reference

- [FreeBSD handbook](#)
- [NCTU SA - Install Applications](#)
- [FreeBSD Ports - pellaeon](#)
- [FreeBSD wiki - pkgng](#)
- [FreeBSD wiki - Pkg Primer](#)
- [portmaster - Hsian Studio](#)
- command manual

This is the end of today's course

Thanks for everyone

More things

PKGSITE

如果想改用其他 FreeBSD Packages Mirror
就得設定此環境變數

setenv PKGSITE PACKAGES_MIRROR_URL

PKGSITE (cont'd)

如果之後想移除此環境變數時
可下此指令

unsetenv PKGSITE

portconf

一次設定好編譯參數

以後裝新機就不用重新勾選

portconf (cont'd)

/usr/local/etc/ports.conf

    net/rsync: WITH_ICONV

Wildcard can be used.

ports tree (cont'd)

- distfiles/

預設會把安裝軟體時所需要下載的檔案
存到 /usr/ports/distfiles/ 底下

ports tree (cont'd)

● CHANGES

major changes to ports and the ports infrastructure (for ports committers, maintainers and other developers)

ports tree (cont'd)

- MOVED

A list of (recently) moved or removed ports