

# RPM 與 YUM 的簡介



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# rpm - RPM Package Manager

RPM 是一個強大的命令列導向的工具，擁有安裝、移除、驗證、查詢、升級更新軟體套件等功能。

每一個 RPM 檔案都包含了一些資訊在裡面，像是版本訊息以及用途描述等。

~~另外還有一些相關的 API 提供給進階開發者使用，這樣也許就不用打開終端機來使用命令列了。~~

# 安裝 — rpm -i

```
# rpm -i pcm anx-gtk2-0.3.4-1.i386.rpm
```

```
# rpm -iv pcm anx-gtk2-0.3.4-1.i386.rpm  
Preparing packages for installation...  
pcmanx-gtk2-0.3.4-1
```

```
# rpm -ivh pcm anx-gtk2-0.3.4-1.i386.rpm  
Preparing... ##### [100%]  
 1:pcmanx-gtk2 ##### [100%]
```

# 升級更新 — rpm -U v.s. rpm -F

- 若原本沒有安裝 pcmanx-gtk2 就直接安裝  
# rpm -Uvh pcmanx-gtk2-0.3.4-2.i386.rpm  
Preparing... ##### [100%]  
1:pcmanx-gtk2 ##### [100%]
- 若原本沒有安裝 pcmanx-gtk2 或是版本相同  
就什麼都不做，也不會產生任何訊息  
# rpm -Fvh pcmanx-gtk2-0.3.4-2.i386.rpm  
#

# 移除 — rpm -e

```
# rpm -e pcmanx-gtk2  
# rpm -e pcmanx-gtk2-0.3.4  
# rpm -e pcmanx-gtk2-0.3.4-1  
# rpm -e pcmanx-gtk2-0.3.4-1.i386
```

# rpm 命名規則

pcmanx-gtk2-0.3.4-1.i386.rpm

套件名稱 pcmanx-gtk2

版本資訊 0.3.4

釋出次數 1

適合平台 i386

(i486,i586,i686,athlon,x86\_64,ppc,noarch,...)

# 查詢資訊 — rpm -qi

```
# rpm -qi pccmanx-gtk2
# rpm -qi pccmanx-gtk2-0.3.4
# rpm -qi pccmanx-gtk2-0.3.4-1
# rpm -qi pccmanx-gtk2-0.3.4-1.i386
Name       : pccmanx-gtk2           Relocations: (not relocatable)
Version    : 0.3.4                 Vendor: PCMan X GTK+ 2 project
Release    : 1                     Build Date: 西元 2006 年 04 月 30 日 (週日) 22 時 19 分 01 秒
Install Date: 西元 2006 年 04 月 30 日 (週日) 22 時 41 分 55 秒   Build Host: linux_machine
Group      : Applications/Internet Source RPM: pccmanx-gtk2-0.3.4-1.src.rpm
Size       : 368065                License: GPL
Signature  : (none)
Packager   : Shih-Yuan Lee (FourDollars) <fourdollars@gmail.com>
URL        : http://pccmanx.csie.net
Summary    : user-friendly telnet client designed for BBS browsing.
Description:
An easy-to-use telnet client mainly targets BBS users.
PCMan X is a newly developed GPL'd version of PCMan, a full-featured famous BBS client
formerly designed for MS Windows only. It aimed to be an easy-to-use yet full-featured telnet
client facilitating BBS browsing with the ability to process double-byte characters.
```

# 查詢內容物 — rpm -ql

```
# rpm -ql pcmanx-gtk2
# rpm -ql pcmanx-gtk2-0.3.4
# rpm -ql pcmanx-gtk2-0.3.4-1
# rpm -ql pcmanx-gtk2-0.3.4-1.i386
/usr/bin/pcmanx
/usr/share/applications/pcmanx.desktop
/usr/share/locale/zh_CN/LC_MESSAGES/pcmanx.mo
/usr/share/locale/zh_TW/LC_MESSAGES/pcmanx.mo
/usr/share/pcmanx/emoticons
/usr/share/pcmanx/sitelist
/usr/share/pixmaps/pcmanx.png
```



# 查詢所有套件 — rpm -qa

```
# rpm -qa pc*  
pcmciautils-012-0.FC5.2  
pcre-6.3-1.2.1  
pcmanx-gtk2-0.3.4-1  
pciutils-2.2.1-1.2  
pciutils-devel-2.2.1-1.2
```

```
# rpm -qa | grep what_you_want
```

# 從檔案反查套件 — rpm -qf

```
# whereis pcmanx  
pcmanx: /usr/bin/pcmanx /usr/share/pcmanx  
# rpm -qf /usr/bin/pcmanx  
pcmanx-gtk2-0.3.4-1
```

```
# which test  
/usr/bin/test  
# rpm -qf /usr/bin/test  
coreutils-5.93-7.2
```

# 相依性 — rpm -qR

```
# rpm -qR yum
/bin/bash
/bin/sh
/sbin/chkconfig
/sbin/service
/usr/bin/python
config(yum) = 2.6.0-1
coreutils
libxml2-python
python
python(abi) = 2.4
python-elementtree
python-sqlite
rpm >= 0:4.1.1
rpm-python
rpmlib(CompressedFileNames) <= 3.0.4-1
rpmlib(PayloadFilesHavePrefix) <= 4.0-1
urlgrabber
```

# 設定檔 — rpm -qc

```
# rpm -qc yum
/etc/cron.daily/yum.cron
/etc/cron.weekly/yum.cron
/etc/logrotate.d/yum
/etc/rc.d/init.d/yum
/etc/yum.conf
/etc/yum/pluginconf.d/installonlyn.conf
/etc/yum/yum-daily.yum
```

# 文件檔 — rpm -qd

```
# rpm -qd yum
/usr/share/doc/yum-2.6.0/AUTHORS
/usr/share/doc/yum-2.6.0/COPYING
/usr/share/doc/yum-2.6.0/ChangeLog
/usr/share/doc/yum-2.6.0/INSTALL
/usr/share/doc/yum-2.6.0/PLUGINS
/usr/share/doc/yum-2.6.0/README
/usr/share/doc/yum-2.6.0/TODO
/usr/share/man/man5/yum.conf.5.gz
/usr/share/man/man8/yum-arch.8.gz
/usr/share/man/man8/yum-shell.8.gz
/usr/share/man/man8/yum.8.gz
```

# ChangeLog — rpm -q --changelog

```
# rpm -q --changelog yum
```

```
* 二 3月 07 2006 Jeremy Katz <katzj@redhat.com> - 2.6.0-1
```

```
- update to 2.6.0 final containing fix for #176257
```

```
* 六 3月 04 2006 Paul Nasrat <pnasrat@redhat.com> - 2.5.3-5
```

```
- Add support for patterns in YumBase.install()
```

```
* 五 3月 03 2006 Paul Nasrat <pnasrat@redhat.com> - 2.5.3-4
```

```
- Cover pkg then group selection in conditional group support (#181858)
```

```
* 五 3月 03 2006 Paul Nasrat <pnasrat@redhat.com> - 2.5.3-3
```

```
- Conditional group support (#181858)
```

```
...
```

# 安裝移除時所做的額外動作

```
# rpm -q --scripts yum
postinstall scriptlet (using /bin/sh):
/sbin/chkconfig --add yum
/sbin/service yum condrestart >> /dev/null
exit 0
preuninstall scriptlet (using /bin/sh):
if [ $1 = 0 ]; then
  /sbin/chkconfig --del yum
  /sbin/service yum stop >> /dev/null
fi
exit 0
```

# 查詢尚未安裝的套件 — rpm -qp

- 套件資訊  
# rpm -qpi pcmanx-gtk2-0.3.4-1.i386.rpm
- 內容物  
# rpm -qpl pcmanx-gtk2-0.3.4-1.i386.rpm
- 相依性  
# rpm -qpR pcmanx-gtk2-0.3.4-1.i386.rpm
- 設定檔  
# rpm -qpc pcmanx-gtk2-0.3.4-1.i386.rpm
- 說明檔  
# rpm -qpd pcmanx-gtk2-0.3.4-1.i386.rpm



# 檢驗 — rpm -V

```
# rpm -V yum
S.5...T. c /etc/yum/pluginconf.d/installonlyn.conf
# rpm -Vf /etc/yum.conf
S.5...T. c /etc/yum/pluginconf.d/installonlyn.conf
# rpm -Vp yum-2.6.0-1.noarch.rpm
S.5...T. c /etc/yum/pluginconf.d/installonlyn.conf
# rpm -Vv pcmanx-gtk2
..... /usr/bin/pcmanx
..... /usr/share/applications/pcmanx.desktop
..... /usr/share/locale/zh_CN/LC_MESSAGES/pcmanx.mo
..... /usr/share/locale/zh_TW/LC_MESSAGES/pcmanx.mo
..... /usr/share/pcmanx/emoticons
..... /usr/share/pcmanx/sitelist
..... /usr/share/pixmaps/pcmanx.png
```

# 檢驗 — 訊息說明

c %config configuration file.

d %doc documentation file.

g %ghost file (i.e. the file contents are not included in the package payload).

l %license license file.

r %readme readme file.

S file Size differs

M Mode differs (includes permissions and file type)

5 MD5 sum differs

D Device major/minor number mismatch

L readLink(2) path mismatch

U User ownership differs

G Group ownership differs

T mTime differs

# YUM—Yellow dog Updater, Modified

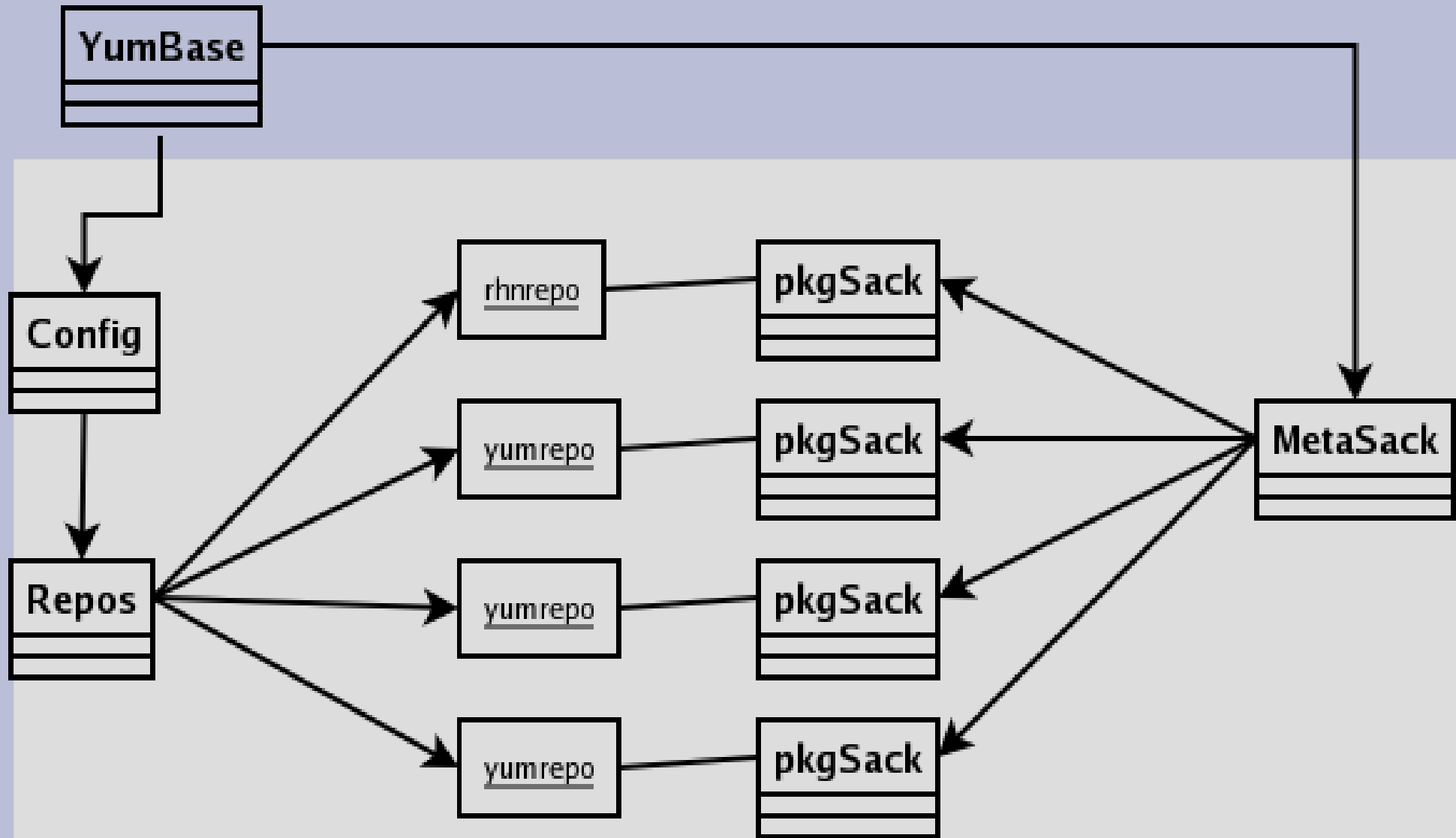
- YUM 是一個自動化處理 RPM 套件安裝、移除、更新的相依性問題的工具。
- 3rd Party 提供的軟體套件儲存庫
- ~~plugin, addon, extension~~
- ~~Mirror YUM Server~~

# 設定 yum repository

```
/etc/yum.repos.d/*.repo
[core]
name=Fedora Core $releasever - $basearch
#baseurl=http://download.fedora.redhat.com/pub/fedora/linux/core/$releasever/$basearch/os/
mirrorlist=http://fedora.redhat.com/download/mirrors/fedora-core-$releasever
enabled=1
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-fedora file:///etc/pki/rpm-gpg/RPM-GPG-KEY
#
[core-debuginfo]
name=Fedora Core $releasever - $basearch - Debug
baseurl=http://download.fedora.redhat.com/pub/fedora/linux/core/$releasever/$basearch/debug/
enabled=0
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-fedora file:///etc/pki/rpm-gpg/RPM-GPG-KEY
#
[core-source]
name=Fedora Core $releasever - Source
baseurl=http://download.fedora.redhat.com/pub/fedora/linux/core/$releasever/source/SRPMS/
enabled=0
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-fedora file:///etc/pki/rpm-gpg/RPM-GPG-KEY
```

# 使用 CLE 的 yum repository

- ftp://cle.linux.org.tw/pub/fedora/yum/  
RPM-GPG-KEY-Fedora-Extras  
RPM-GPG-KEY-cle  
RPM-GPG-KEY-freshrpms  
RPM-LIVNA-GPG-KEY  
5/cle.repo  
5/fedora-core.repo  
5/fedora-extras.repo  
5/fedora-updates-testing.repo  
5/fedora-updates.repo  
5/freshrpms.repo  
5/livna.repo
- /etc/pki/rpm-gpg/ /etc/yum.repos.d/



# 升級更新 — yum ckeck-update

- 檢查更新  
yum check-update  
yum list updates
- 進行更新  
yum update  
yum upgrade (FC3->FC4->FC5)  
yum update yum

# 查詢套件 — yum list

- 已經安裝的套件  
yum list installed
- 還沒有安裝的套件  
yum list available
- 可以升級的套件  
yum list updates
- 查詢額外的套件  
yum list extras



# 查詢套件資訊 — yum info

```
# yum info pccmanx-gtk2
```

```
Installed Packages
```

```
Name : pccmanx-gtk2
```

```
Arch : i686
```

```
Version: 0.3.4
```

```
Release: 1
```

```
Size : 359 k
```

```
Repo : installed
```

```
Summary: user-friendly telnet client designed for BBS browsing.
```

Description:

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PCMan X is a newly developed GPL'd version of PCMan, a full-featured famous BBS client formerly designed for MS Windows only.

It aimed to be an easy-to-use yet full-featured telnet client facilitating BBS browsing with the ability to process double-byte characters.

# 查詢套件資訊 — yum info

```
# yum info anjuta
```

```
Available Packages
```

```
Name : anjuta
```

```
Arch : i386
```

```
Version: 1.2.4a
```

```
Release: 1.fc5
```

```
Size : 2.5 M
```

```
Repo : extras
```

```
Summary: GNOME IDE for C and C++
```

```
Description:
```

Anjuta is a versatile Integrated Development Environment (IDE) for C and C++. It has been written for GTK/GNOME, and features a number of advanced programming facilities. It is basically a GUI interface for the collection of command line programming utilities and tools available for the GNU system. These are usually run via a text console, and can be unfriendly to use.

This package includes `anjuta_create_global_tags.sh`, which will allow you to create an up to date, local `system.tags`.

# 查詢套件 — yum search

```
# yum search xml
```

```
...
```

```
# yum provides /usr/bin/Xorg
```

```
...
```

```
xorg-x11-server-Xorg.i386          1.0.1-9.fc5          updates
```

```
Matched from:
```

```
/usr/bin/Xorg
```

```
xorg-x11-server-Xorg.i386          1.0.1-9.fc5          installed
```

```
Matched from:
```

```
/usr/bin/Xorg
```

```
xorg-x11filesystem.noarch          7.0-1                 installed
```

```
Matched from:
```

```
/usr/bin/xorg-x11filesystem-upgrade
```

# 安裝, 移除 — yum install, remove

- 安裝  
yum install anjuta
- 移除  
yum remove anjuta
- 安裝 rpm 檔案  
yum localinstall pcmanx-gtk2-0.3.4-1.rpm
- 升級 rpm 檔案  
yum localupdate pcmanx-gtk2-0.3.4-2.rpm

# 群組操作 — yum group\*

- 查詢  
yum grouplist  
yum groupinfo "DNS Name Server"
- 安裝  
yum groupinstall
- 移除  
yum groupremove
- 升級  
yum groupupdate