



# Linux

Linux – Terminal PacMan Package Installer

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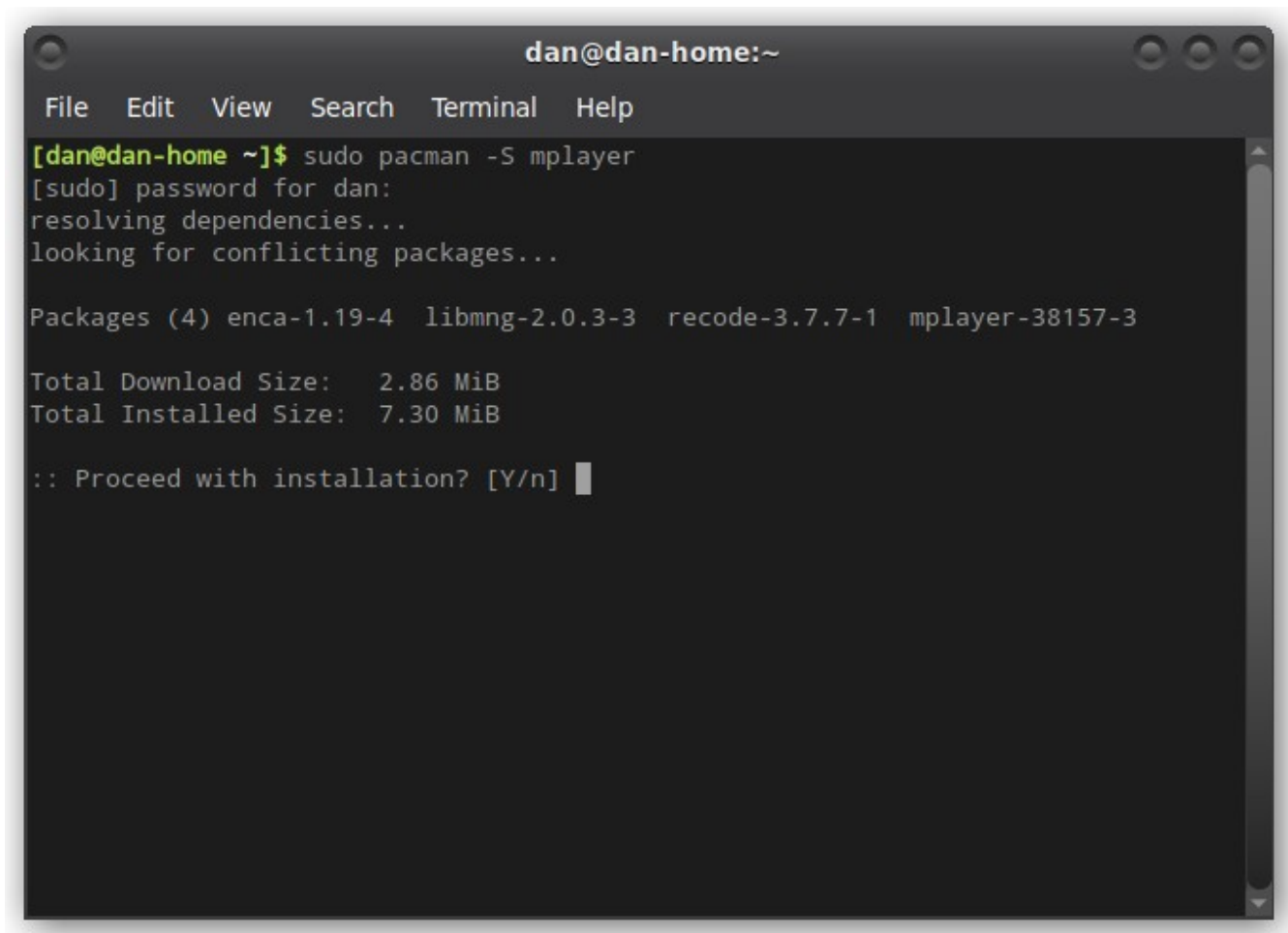
So, I wouldn't be complete in my writings, if I didn't give a brief introduction to using pacman in Manjaro/Arch based Linux distributions. :)

If you are running a Debian based Linux distro, such as Ubuntu or Mint, these commands will not work for you. See my previous writing on how to use the APT installer.

Also, if you are changing from a Debian based system running APT, to an Arch based system running pacman, it will be a little confusing at first. I hope this will help the information make a little more sense for you. Pacman uses switches, after the 'pacman' command, just like 'apt' or 'apt-get', but they are not full words, such as 'apt install' or 'apt search'. Instead they use switches such as -S or -R.

```
pacman -S <package1_name> <package2_name>
```

This command will synchronize with the repository database, and then look for the packages you want to install. Once it finds matches, it will give you the option of installing them onto your system.

A terminal window titled 'dan@dan-home:~' with a menu bar containing 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The terminal shows the command 'sudo pacman -S mplayer' being executed. It prompts for a password, then shows the resolution of dependencies and a search for conflicting packages. The output lists four packages: enca-1.19-4, libmng-2.0.3-3, recode-3.7.7-1, and mplayer-38157-3. It also shows the total download size (2.86 MiB) and total installed size (7.30 MiB). The prompt 'Proceed with installation? [Y/n]' is shown with a cursor.

```
dan@dan-home:~  
File Edit View Search Terminal Help  
[dan@dan-home ~]$ sudo pacman -S mplayer  
[sudo] password for dan:  
resolving dependencies...  
looking for conflicting packages...  
  
Packages (4) enca-1.19-4  libmng-2.0.3-3  recode-3.7.7-1  mplayer-38157-3  
  
Total Download Size:    2.86 MiB  
Total Installed Size:  7.30 MiB  
  
:: Proceed with installation? [Y/n]
```

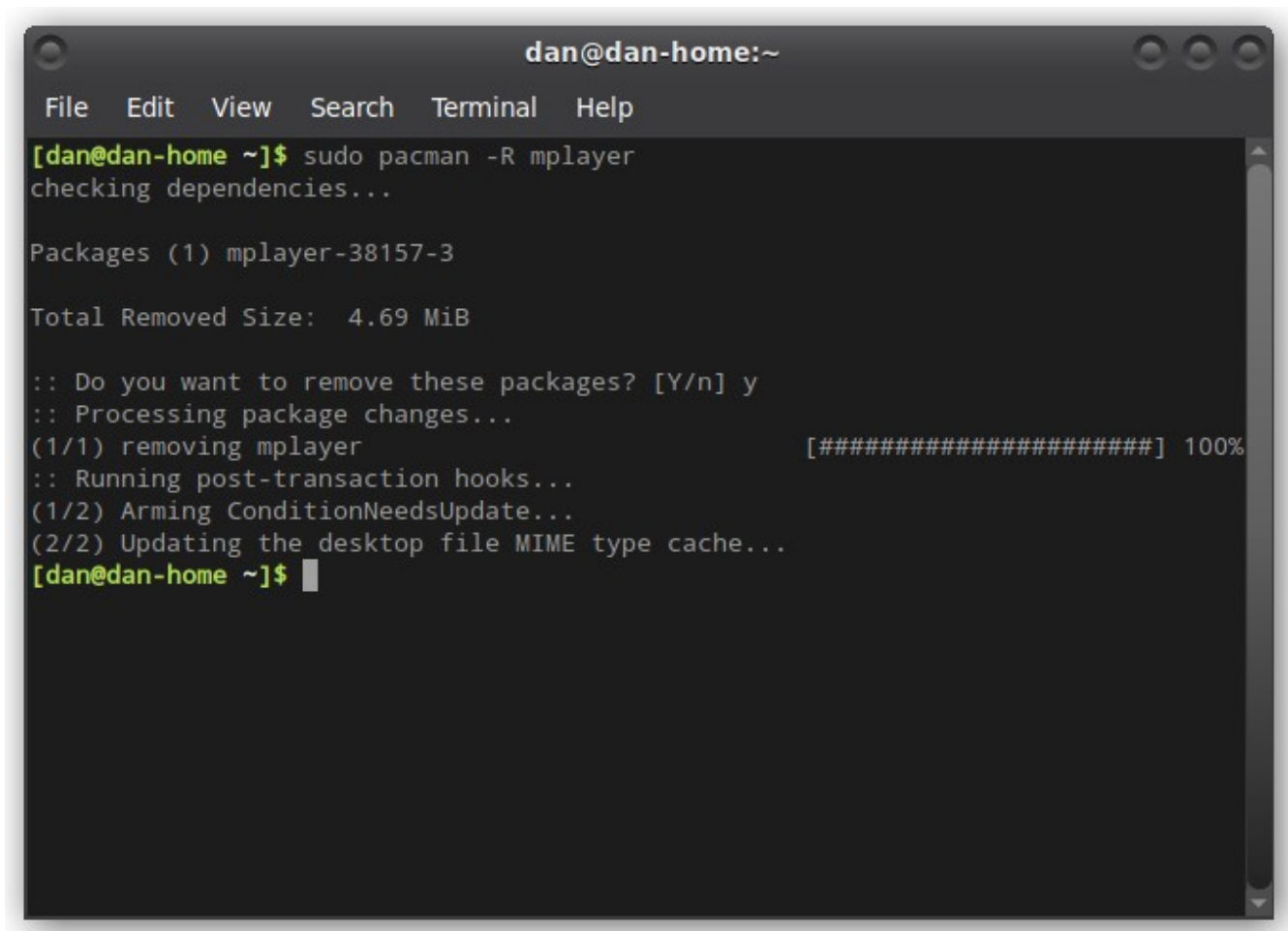
In this case, I did a search for mplayer. It is available to install, and if I hit <enter> or 'Y' at this prompt, it will go through the installation process and make the program available.

```
dan@dan-home:~  
File Edit View Search Terminal Help  
Total Download Size: 2.86 MiB  
Total Installed Size: 7.30 MiB  
  
:: Proceed with installation? [Y/n]  
:: Retrieving packages...  
  recode-3.7.7-1-x... 429.2 KiB 1325 KiB/s 00:00 [#####] 100%  
  enca-1.19-4-x86_64 103.7 KiB 33.8 MiB/s 00:00 [#####] 100%  
  libmng-2.0.3-3-x... 190.8 KiB 31.1 MiB/s 00:00 [#####] 100%  
  mplayer-38157-3-... 2.2 MiB 7.19 MiB/s 00:00 [#####] 100%  
(4/4) checking keys in keyring [#####] 100%  
(4/4) checking package integrity [#####] 100%  
(4/4) loading package files [#####] 100%  
(4/4) checking for file conflicts [#####] 100%  
(4/4) checking available disk space [#####] 100%  
:: Processing package changes...  
(1/4) installing recode [#####] 100%  
(2/4) installing enca [#####] 100%  
(3/4) installing libmng [#####] 100%  
(4/4) installing mplayer [#####] 100%  
:: Running post-transaction hooks...  
(1/3) Arming ConditionNeedsUpdate...  
(2/3) Updating the info directory file...  
(3/3) Updating the desktop file MIME type cache...  
[dan@dan-home ~]$
```

Once I hit <enter> this is the rest of the installation process.

`pacman -R <package_name>`

This command will remove a package from your system. Now that I have mplayer on my computer, let me show you how to remove it.

A terminal window titled 'dan@dan-home:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows the command 'sudo pacman -R mplayer' being executed. It displays the package 'mplayer-38157-3' and its size '4.69 MiB'. It asks for confirmation to remove the package, which is confirmed with 'y'. The terminal shows the progress of removing the package, including running post-transaction hooks and updating the desktop file MIME type cache. The process is completed with a progress bar at 100%.

```
dan@dan-home:~  
File Edit View Search Terminal Help  
[dan@dan-home ~]$ sudo pacman -R mplayer  
checking dependencies...  
  
Packages (1) mplayer-38157-3  
  
Total Removed Size: 4.69 MiB  
  
:: Do you want to remove these packages? [Y/n] y  
:: Processing package changes...  
(1/1) removing mplayer [#####] 100%  
:: Running post-transaction hooks...  
(1/2) Arming ConditionNeedsUpdate...  
(2/2) Updating the desktop file MIME type cache...  
[dan@dan-home ~]$
```

And just as quickly as it installed, it has been removed.

`pacman -Rs <package_name>`

When a program is installed on your computer, pacman will also install any dependencies that may be required at the same time. If you would like to remove those at the same time you remove the program, you can type in 'sudo pacman -Rs mplayer', or whatever program you are removing.

```
dan@dan-home:~  
File Edit View Search Terminal Help  
[dan@dan-home ~]$ sudo pacman -Rs mplayer  
checking dependencies...  
  
Packages (4) enca-1.19-4 libmng-2.0.3-3 recode-3.7.7-1 mplayer-38157-3  
  
Total Removed Size: 7.30 MiB  
  
:: Do you want to remove these packages? [Y/n]  
:: Running pre-transaction hooks...  
(1/1) Removing old entries from the info directory file...  
:: Processing package changes...  
(1/4) removing mplayer [#####] 100%  
(2/4) removing libmng [#####] 100%  
(3/4) removing enca [#####] 100%  
(4/4) removing recode [#####] 100%  
:: Running post-transaction hooks...  
(1/2) Arming ConditionNeedsUpdate...  
(2/2) Updating the desktop file MIME type cache...  
[dan@dan-home ~]$
```

Did you notice a difference between the last two screen shots? The first one only removed mplayer, while the second one also removed 4 dependencies that were also installed.

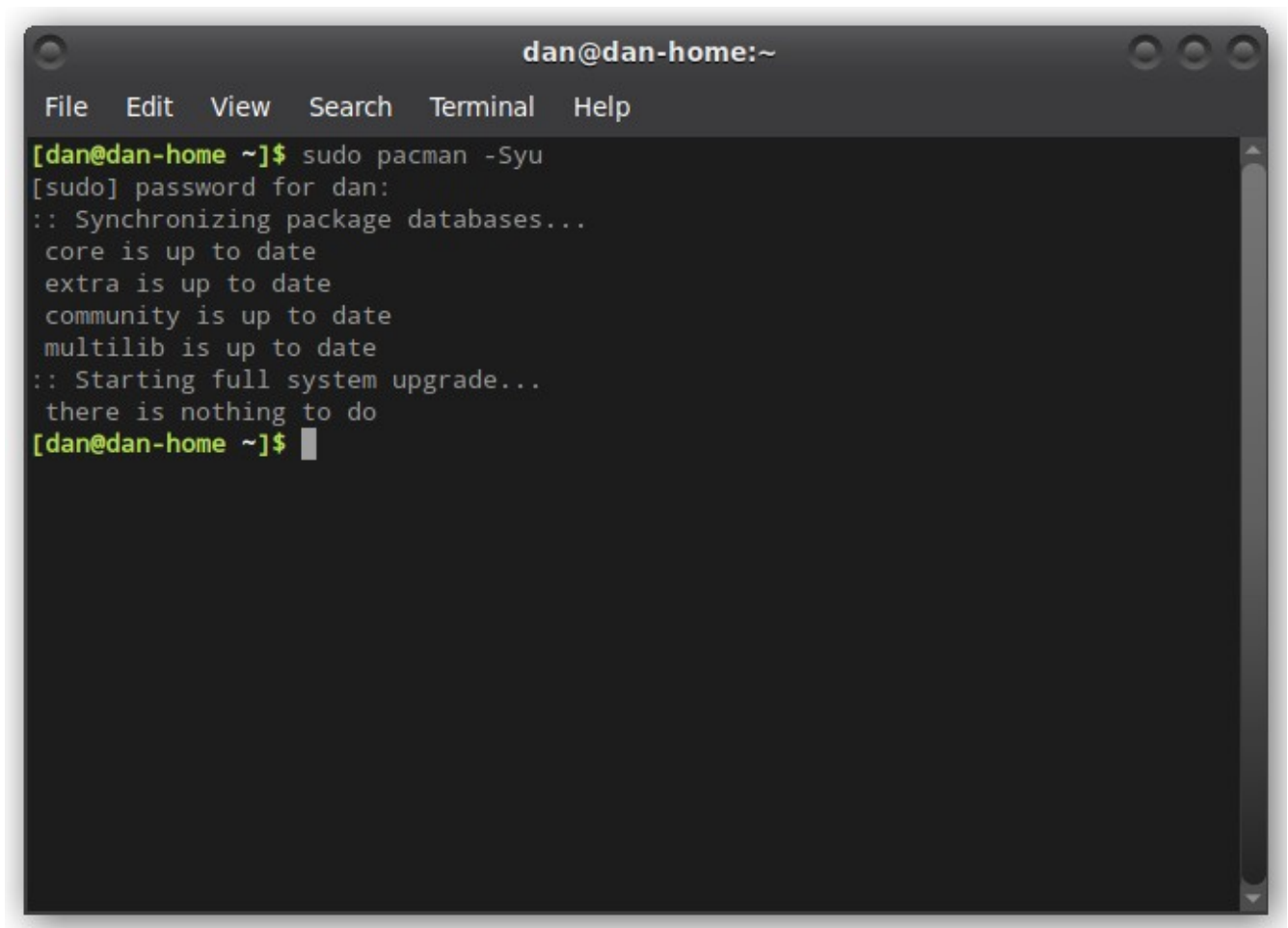
pacman -Syu

Remember in the writing about Debians APT package management, I talked about doing the ‘apt update’ and ‘apt upgrade’ to do any upgrades available to your computer? Well, this is the pacman version of those two commands. If you type in ‘sudo pacman -Syu’, your system will actually perform three different functions.

S – Syncs with the repository

y – Refreshes the local database on your computer

u – Updates your system

A terminal window titled 'dan@dan-home:~' with a menu bar containing 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The terminal shows the command 'sudo pacman -Syu' being executed. It prompts for a password, then synchronizes package databases, reporting that 'core', 'extra', 'community', and 'multilib' are up to date. It then starts a full system upgrade, reporting that there is nothing to do. The prompt returns to '[dan@dan-home ~]\$' with a cursor.

```
dan@dan-home:~  
File Edit View Search Terminal Help  
[dan@dan-home ~]$ sudo pacman -Syu  
[sudo] password for dan:  
:: Synchronizing package databases...  
core is up to date  
extra is up to date  
community is up to date  
multilib is up to date  
:: Starting full system upgrade...  
there is nothing to do  
[dan@dan-home ~]$
```

When I try the command on my system right now, this is what I'm seeing. I did have some upgrades yesterday that have already been completed. If there were upgrades available, it would give you an option to install them.

That is the very basics of using pacman on an Arch based distro. There are a lot more switches and combinations available to use, but we'll get into those at a later date. For now, this is enough to keep your system up to date, and allow you to install fun programs like I talked about in the 'terminal fun commands' writing.