

Quiz: Software Packaging and File Archiving on Linux

Introduction

This lab focuses on installing and removing software in Linux, and working with zipped files. You'll be installing a text editor called Atom, and extracting/un-extracting .tar files. You'll also use **apt** to install/uninstall programs.

Installing Sublime Text

First, use dpkg to install a text editor, called Sublime Text. A .deb file is located at "/home/qwiklab/downloads/sublime-text_build-3211_amd64.deb", which you can install using this command:

```
sudo dpkg -i /home/qwiklab/downloads/sublime-text_build-3211_amd64.deb
```

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You'll see some errors after this command, but that's okay! The Sublime Text package has some dependencies that aren't installed on

your machine yet, and dpkg is just warning you that they need to be installed:

```
Selecting previously unselected package sublime-text.
```

```
(Reading database ... 36788 files and directories currently installed.)
```

```
Preparing to unpack .../sublime-text_build-3211_amd64.deb ...
```

```
Unpacking sublime-text (3211) ...
```

```
dpkg: dependency problems prevent configuration of sublime-text:
```

```
sublime-text depends on libgtk-3-0; however:
```

```
Package libgtk-3-0 is not installed.
```

```
dpkg: error processing package sublime-text (--install):
```

```
dependency problems - leaving unconfigured
```

```
Processing triggers for mime-support (3.62) ...
```

```
Processing triggers for hicolor-icon-theme (0.17-2) ...
```

```
Errors were encountered while processing:
```

```
sublime-text
```

You can remedy this by using **apt** to fix the missing dependencies, using this command:

```
sudo apt install -f
```

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You'll be prompted to confirm your decision to continue with the operation by typing "Y" (for "Yes"), midway through the process.

Now Sublime Text is successfully installed, which you can verify using dpkg:

```
dpkg -s sublime-text
```

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```
Package: sublime-text
```

```
Status: install ok installed
```

```
Priority: optional
```

```
Section: editors
```

```
Installed-Size: 34033
```

```
Maintainer: Sublime HQ Pty Ltd
```

```
Architecture: amd64
```

Version: 3211

Click Check my progress to verify the objective.

Install Sublime Text

Check my progress

Extracting an archive

Next, you will extract a .tar archive. The archive "extract_me.tar" is located in "/home/qwiklab/downloads/". Move to that directory, using this command:

```
cd /home/qwiklab/downloads
```

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You can use the Linux tar command to extract it using this command:

```
sudo tar -xvf extract_me.tar
```

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The contents of the archive (the file named "great_job") are then extracted:

```
home/qwiklab/extract_me/
```

```
home/qwiklab/extract_me/great_job
```

Click Check my progress to verify the objective.

Extract Archive

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Archiving files

First, move back to the original directory:

```
cd ~
```

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You can also use the tar command to do the reverse operation, creating an archive. There are three files in your /home/qwiklab/documents folder named "Earth", "Mercury", and "Venus". Use tar to archive them into the file "Planets.tar" using this command (one line):

```
tar -cvf Planets.tar --absolute-names /home/qwiklab/documents/Earth  
/home/qwiklab/documents/Mercury /home/qwiklab/documents/Venus
```

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"Planets.tar" will then be added to your current directory, and will contain the three planet files:

```
/home/qwiklab/documents/Earth
```

```
/home/qwiklab/documents/Mercury
```

```
/home/qwiklab/documents/Venus
```

Click [Check my progress](#) to verify the objective.

Archive Files

Check my progress

Installing 7-Zip

You can also install programs on Linux, using **apt** too, which handles dependencies for you to simplify the installation process. You can install the program 7-Zip, using **apt**, with a simple one-line command:

```
sudo apt install p7zip-full
```

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When it's finished, 7-Zip will be installed:

```
Reading package lists... Done
```

```
Building dependency tree
```

```
Reading state information... Done
```

```
The following additional packages will be installed:
```

```
p7zip
```

Suggested packages:

p7zip-rar

The following NEW packages will be installed:

p7zip p7zip-full

0 upgraded, 2 newly installed, 0 to remove and 21 not upgraded.

Need to get 1540 kB of archives.

After this operation, 5780 kB of additional disk space will be used.

Do you want to continue? [Y/n] y

Get:1 <http://deb.debian.org/debian> buster/main amd64 p7zip amd64
16.02+dfsg-6 [376 kB]

Get:2 <http://deb.debian.org/debian> buster/main amd64 p7zip-full amd64
16.02+dfsg-6 [1164 kB]

Fetch: 1540 kB in 0s (8625 kB/s)

debconf: delaying package configuration, since apt-utils is not installed

Selecting previously unselected package p7zip.

(Reading database ... 48397 files and directories currently installed.)

Preparing to unpack .../p7zip_16.02+dfsg-6_amd64.deb ...


```
Unpacking p7zip (16.02+dfsg-6) ...
```

```
Selecting previously unselected package p7zip-full.
```

```
Preparing to unpack .../p7zip-full_16.02+dfsg-6_amd64.deb ...
```

```
Unpacking p7zip-full (16.02+dfsg-6) ...
```

```
Setting up p7zip (16.02+dfsg-6) ...
```

```
Setting up p7zip-full (16.02+dfsg-6) ...
```

You'll be prompted to confirm your decision midway through the installation process. Confirm this by typing "Y" (for "Yes"). Then, 7-Zip will be installed:

You can verify the installation using dpkg, with this command:

```
dpkg -s p7zip-full
```

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```
Package: p7zip-full
```

```
Status: install ok installed
```

```
Priority: optional
```

```
Section: utils
```

Installed-Size: 4659

Maintainer: Robert Luberda<robert@debian.org>

Architecture: amd64

Source: p7zip

Version: 16.02+dfsg-6

Click [Check my progress](#) to verify the objective.

Install 7-Zip

[Check my progress](#)

Uninstalling GIMP

Uninstallation can also be handled by **apt** by using "remove" instead of "install" as the argument. GIMP, an image-editing program, is already installed on your machine. Uninstall it now, using **apt** with this command:

```
sudo apt remove gimp
```

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You'll be prompted to confirm your decision midway through the uninstallation process. Confirm this by typing "Y" (for "Yes"). Then, GIMP will be uninstalled:

```
Reading package lists... Done
```

```
Building dependency tree
```

```
Reading state information... Done
```

```
The following packages were automatically installed and are no longer  
required:
```

```
fonts-droid-fallback fonts-noto-mono ghostscript gimp-data gsfonts
```

```
i965-va-driver intel-media-va-driver libaa1 libamd2 libaom0 libasound2
```

```
libasound2-data libasyncns0 libavcodec58 libavformat58 libavutil56
```

```
libbabl-0.1-0 libblas3 libcaca0 libcamd2 libccolamd2 libcholmod3
```

```
libchromaprint1 libcodec2-0.8.1 libcolamd2 libcrystalhd3
```

```
libcupsfilters1 libcupsimage2 libde265-0 libexiv2-14 libflac8
```

```
libgegl-0.4-0 libgegl-common libgexiv2-2 libgfortran5 libgimp2.0
```

libgme0 libgs9 libgs9-common libgsm1 libheif1 libigdgmm5 libijs-0.35

libilmbase23 libjbig2dec0 liblapack3 libmetis5 libmng1 libmp3lame0

libmpg123-0 libmypaint-1.3-0 libmypaint-common libnuma1 libogg0

libopenexr23 libopenjp2-7 libopenmpt0 libopus0 libpaper-utils libpaper1

libpoppler-glib8 libpoppler82 libpulse0 libraw19 libSDL1.2debian

libshine3 libslang2 libsnappy1v5 libsndfile1 libsoxr0 libspeex1

libssh-gcrypt-4 libsuitesparseconfig5 libswresample3 libswscale5

libtheora0 libtwolame0 libumfpack5 libva-drm2 libva-x11-2 libva2

libvdpau-va-gl1 libvdpau1 libvorbis0a libvorbisenc2 libvorbisfile3

libvpx5 libwavpack1 libwebpdemux2 libwebpmux3 libwmf0.2-7 libx264-155

libx265-165 libxcb-xfixes0 libxvidcore4 libzvbi-common libzvbi0

mesa-va-drivers mesa-vdpau-drivers poppler-data va-driver-all

vdpau-driver-all

Use 'sudo apt autoremove' to remove them.

The following packages will be REMOVED:

gimp

```
0 upgraded, 0 newly installed, 1 to remove and 21 not upgraded.
```

```
After this operation, 19.5 MB disk space will be freed.
```

```
Do you want to continue? [Y/n] y
```

```
(Reading database ... 48496 files and directories currently installed.)
```

```
Removing gimp (2.10.8-2) ...
```

```
Processing triggers for mime-support (3.62) ...
```

```
Processing triggers for desktop-file-utils (0.23-4) ...
```

You can verify this using dpkg (like before) with this command:

```
dpkg -s gimp
```

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```
dpkg-query: package 'gimp' is not installed and no information is  
available
```

```
Use dpkg --info (= dpkg-deb --info) to examine archive files.
```

Click Check my progress to verify the objective.

Uninstall GIMP

[Check my progress](#)

Conclusion

Congrats! You've successfully installed and uninstalled programs on Linux, and archived and unarchived .tar files.