Live-build basics: Building images in Debian family

Have you ever thought about producing your own Debian based variation with your own software selection? If the answer is yes then read on as it is time set our sights to the program called live-build.

What is live-build? Live-build is a tool by which you can create Debian/Ubuntu/Linux Mint... netboot images, iso images, usb-images and some others. Live-build is a very flexible thing as it gives you the power to decide ,for example, what type of kernel you want on board of your system and how should your default desktop look like.

Some remarks about the live-build: Live build has proven to be a good tool in a stable Debian environment. This means that if you are using Debian testing or unstable you are more than likely to encounter errors which might actually make the live-build iso unfunctional. In the stable Debian environment live build has always been rock solid as far as my 4 years of experience with it can be taken into account.

Live-build example: As live-build is fairly complex here is a short example of commands which should get you on your way. Of course first you need live-build installed so check that you have done that before you continue.

Creating the build forder and configuring the live-build environment

```
mkdir distro
cd distro
lb config -b iso --cache true --apt-recommends true -a i386
--binary-images iso --debian-installer live --linux-flavours 486
--mode debian --debian-installer-gui false --archive-areas "main
```

contrib non-free" --security true --win32-loader false
--interactive shell --updates true

In the above example we first create a directory called **distro** to
host our live build environment. Then we cd into it and execute
the configuration. if you only want to produce a live cd/dvd turn
the --debian-installer to false

In the example: we have the following key features:

*Architecture is 32bit:t he result will be an iso image
*Image will be using live installer: meaning it will copy the
content of the image to a computer if you desire to install the
cd/dvd.

*The kernel being used is 486: this is because being generic is
being compatible in most cases.

*Archives being used: main contrib non-free. If you want to use
only the free software then remove contrib and nonfree. **Note:**
adding contrib and non-free will automatically pull in firmware
drivers needed by wlan cards.

*Interactive shell: The build pauses on a chroot state where you
can install software which youn want to have on your build
(desktop, display manager...)

Tip: If you have some settings or files you would like to have
appearing at your newly created iso's user home directory move
them to /etc/skel which is inside chroot dir. If you transfer your
configuration settings (like .gconf folders or the .config or
.fluxbox or GnuStep folder) inside /etc/skel you will have your
current desktop visuals and settings cloned to the new image you
are creating.

Note: You need to use sudo or root user in order to move packages
to /etc/skel or to /home inside chroot folder

Tip: If you want to install custom debian packages copy them to chroot /home directory and install them via chrooted build terminal as follows:

```
cd home
dpkg -i nameofthepackage.deb
```

OR

```
dpkg -i *.deb --> this command installs all debian packages of the given directory
```

Tip: If you want to try to reduce the image size change: apt-recommends to false. Generally I would not recommend this unless you are absolutely certain about what you are doing.

Then when you are in chroot you can also install packages with apt-get

```
apt-get install something.
```

An example: lxde desktop with some programs

```
apt-get install lxde pulseaudio pavucontrol vlc iceweasel xserver-xog lightdm xpdf abiword leafpad xserver-xorg-video
```

The above command should install lxde (a lightweight desktop environment), lightdm (a display manager), xserver-xorg and video drivers(xserver so you can run graphical environment), abiword (a lightweight text editor looking like MS Word 2000), leafpad (a notepad like simple text editor), icewasel (Debian's version of Firefox with different branding and some patches), xpdf (a pdf reader) and vlc (a media player).

Of course the above is just a simple example and you might also perhaps want to consider adding some other software.Once you are

done type exit in chroot and the building of Debian live image
should begin.

Do keep in mind that live-build is a tricky system and things
might fail so always backup every valuable data you have and make
sure that you have a rescue plan (working install cd, if the
Debian live you created happens to be a failure. **Also to be noted:**
this tutorial only gave some instructions about live-build and
there are plenty of features which also should be explored. See
live-build manual pages for more information man live-build.
I will also suggest exploring Debian forums and wikipages
regarding the live-build since they might provide some valuable
additions.

Once you are done burn the resulting image to rewritable cd/dvd or
usb or run it in a virtual environment like virtual box to test it
out. Good luck!