Devuan Installation

My Devuan installation notes.

Devuan Setups

These depends on my need when using that particular machine.

- using virtualbox from oracle (just like my slackware setup)
- using texlive (install using tlmgr)
    - alternatively, install texlive texlive-latex-extra texlive-science
- install freecad kicad openscad (project stuffs)
- install ntp ntpdate (system management)

Development

- getting *OpenGL* stuffs (glut): `# apt install freeglut3-dev`
- getting *sqlite* stuffs: `# apt install sqlite3 libsqlite3-dev`
- getting glade (will also get gtk library): `# apt install glade`
- getting *wxwidgets* stuffs: `# apt install lib-wxgtk3.0dev`
- getting *my1imgpro* stuffs: `# apt install libavcodec-dev libavdevice-dev libavformat-dev libswscale-dev`
- to compile *sdcc*: `# apt install bison flex libboost-dev texinfo`

note: Setting up mingw-w64 cross-compiler

Web Server

- Install webserver
    - `# apt install apache2`
    - default path for web is `/var/www/html`
    - edit `/etc/apache2/apache2.conf`
        - add *ServerName* (remove annoying startup message!)
        - my *my1apisrv* code need these for *www* dir config

```
    Options FollowSymLinks
    AllowOverride All
    Require all granted
```

- Install php
    - `# apt install php php-cgi libapache2-mod-php php-mysql php-sqlite3`
    - edit `/etc/php/7.0/apache2/php.ini` to enable pdo support
- Create required links in mods-enabled and conf-enabled
    - my my1apisrv code need `rewrite`

    - both folders are in `/etc/apache2`
- Install database
    - `# apt install mariadb-server`
- If running dokuwiki
    - `# apt install php-xml`
- My API client php code needs this
    - `# apt install php-curl`

Multi-Arch (a.k.a. Multi-Lib)

To run 32-bit binary:

- Enable multi-arch: `# dpkg –add-architecture i386`
- Update package list: `# apt update`
- Most probably need libc: `# apt install libc6:i386`
- Install required libraries: (<package>:i386)

To build 32-bit binary:

- Install compiler(s): `# apt install gcc-multilib g++-multilib`
    - Notice that these are 64-bit packages (no :i386 suffix) → cross compilers!
- Use `-m32` gcc option to compile!

Gaming

To play steam games:

- enable multi-arch
- install steam: `# apt install steam` (binary in `/usr/games/steam`)

NFS setup

Dumping this as it is for now:

- client
    - install

```
# apt install nfs-common
```

    - mount

```
# mount -t nfs <host>:/path <mount-point>
```

- server
    - install

```
# apt install nfs-kernel-server
```

- [optional]

```
# mount --bind /path/to/share /mount/point
```

- edit `/etc/exports`
- start

```
service nfs-kernel-server start
```

Others

My iso2boot script need *isohybrid* from syslinux/isolinux project:

- `# apt install syslinux-utils`

Use Tips

Some are applicable to any APT-based distro.

Note for APT-based distro: *To remove translations, create file `/etc/apt/apt.conf.d/99translation` and insert `Acquire::Languages { “none”; };`.*

Note: *look into `unattended-upgrades` (simply `apt install` and run `dpkg-reconfigure –priority=low unattended-upgrades???`)*

List Installed Packages

Using `apt` tool:

```
apt list --installed 2>/dev/null | grep installed
```

Note that apt will issue a warning when piping its output in shell. Hence, the need to redirect `stderr` to `/dev/null`. We can further grep away the packages that were automatically installed.

Using the basic `dpkg` tool:

```
dpkg --get-selections | sed -n 's/^\([^\t]*\)\t.*$/\1/ p'
```

This version, however, only provides package name. To extract similar output from `apt` (assuming output was redirected into a file called `temp.txt`), run

```
cat temp.txt | sed -n 's|^\(.*\)/.*$|\1| p'
```

Adding More Repo

Get proper signature key from that source (`*.asc` file) and add to system using `apt-key`.

```
# cat <key-file.asc> | apt-key add -
```

Create a listing file for source URL in `/etc/apt/sources.list.d/`.

```
# echo "deb [arch=?] <new-repo-url> <version> main" >
/etc/apt/sources.list.d/new-repo.list
```

After doing an `apt update`, should be able to `apt install <pkg>`...

Reconfigure Package

Basically, run a `dpkg-reconfigure <pkg>`

e.g. To change timezone

```
# dpkg-reconfigure tzdata
```

Upgrading APT-based systems

To do an upgrade:

- Modify `/etc/apt/sources.list` and replace the release codenames

  ```
  # sed -i 's/old_release/new_release/g' /etc/apt/sources.list
  ```

  - skip `-i` option for a dry-run
- Update package list

  ```
  # apt update
  ```

- Upgrade distribution

  ```
  # apt dist-upgrade
  ```

- To make sure EVERYTHING is upgraded (avoids old packages held back)

  - `# apt full-upgrade`

- Do house cleaning

  ```
  # apt autoremove
  # apt clean
  ```

That should do it!

Search package for specific binary

- There is a specific tool for that

```
# apt install apt-file
```

- Update the package/file mapping database

```
# apt-file update
```

- Search for “top”

```
# apt-file search --regexp '/top$'
```

Avoiding marking package as manually installed

- Use dry-run (simulation) option `-s`

```
# apt install -s <pg1> ... <pkgN> 2>/dev/null|grep manually
```

- Removed the package(s) displayed from your install list and re-run without `-s`

GRUB Stuffs

To prevent GRUB from looking for other OS every time it is updated:

- edit `/etc/default/grub` and insert

```
GRUB_DISABLE_OS_PROBER=true
```

- run update-grub

To add a custom entry:

- add a menuentry in `/etc/grub.d/40_custom`
- uses the same menuentry format as in `/boot/grub/grub.cfg`
    - e.g. to boot my Slackware partition I can insert

```
menuentry 'Slackware' --class slackware --class gnu-linux --class
gnu --class os $menuentry_id_option 'my1part-<uuid>' {
    insmod part_gpt
    insmod ext2
    set root='hd0,gpt4'
    if [ x$feature_platform_search_hint = xy ]; then
      search --no-floppy --fs-uuid --set=root --hint-bios=hd0,gpt4
```

```
--hint-efi=hd0,gpt4 --hint-baremetal=ahci0,gpt4  <uuid>
    else
      search --no-floppy --fs-uuid --set=root 4d95a526-2518-4fd6-
a904-f7bd2729145d
    fi
    linux /boot/vmlinuz-huge-4.4.240 root=/dev/sda4
}
```

  - use `initrd` (after `linux` line) to specify an initrd/initramfs
  - of course, <uuid> should be a valid filesystem uuid
- run update-grub

KVM Stuffs

If KVM group is missing, simply create one...

```
# [ -z "$(cat /etc/group|grep kvm)" ] && addgroup --gid 125 kvm
```

Issues

Issues... and maybe fixes (if any).

Image Magick's convert error

I found an error when using image magick's convert to create EPS from fig that provides this message:

```
convert-im6.q16: attempt to perform an operation not allowed by the security
policy `EPS' @error/constitute.c/IsCoderAuthorized/421
```

Solution:

- (as root) edit `/etc/ImageMagick-6/policy.xml`
- modify following line (change none → read|write)

```
<policy domain="coder" rights="none" pattern="EPS" />
```

GRUB Prompt

In some cases, after an installation is complete, the system boots to a GRUB prompt. The issue may be caused by a different disk assignment during installation. Things is not so bad since GRUB prompt is very shell-like (e.g. double-tab for completion):

To list available disks:

```
> ls
```

To list content of first partition on the first disk (/dev/sda1) that is using GPT:

```
> ls (hd0,gpt1)
```

So, to boot an installation on second partition instead:

```
> linux (hd0,gpt2)/boot/vmlinuz<...>
> initrd (hd0,gpt2)/boot/initrd.img<...>
> boot
```

BCM Wireless

Device:

```
# lspci -nn | grep BCM
02:00.0 Network controller [0280]: Broadcom Limited BCM43142 802.11b/g/n
[14e4:4365] (rev 01)
```

Install: broadcom-sta-dkms, firmware-linux, firmware-b43-installer (b43-fwcutter)

note: only solves the Wireless Driver part... NOT the bluetooth hardware!

```
# lsusb | grep BCM
Bus 002 Device 004: ID 0a5c:216d Broadcom Corp. BCM43142A0 Bluetooth 4.0
# dmesg | grep blue
[    8.850007] bluetooth hci0: firmware: failed to load
brcm/BCM43142A0-0a5c-216d.hcd (-2)
[    8.850197] bluetooth hci0: Direct firmware load for
brcm/BCM43142A0-0a5c-216d.hcd failed with error -2
```

So, download `BCM43142A0-0a5c-21d6.hcd` in here and place it `/lib/firmware/brcm/` (create that path if it does not exist).

XFCE Desktop

- tapping on my laptop touchpad is NOT working
  - moving around & button clicks are working
  - need to create file `/etc/X11/xorg.conf.d/90-touchpad.conf`

    90-touchpad.conf

    ```
    Section "InputClass"
            Identifier "libinput touchpad catchall"
    ```

```
        MatchIsTouchpad "on"
        MatchDevicePath "/dev/input/event*"
        Driver "libinput"
        Option "Tapping" "on"
EndSection
```

- lid event does not trigger suspend (but manual suspend works)
  - this is a systemd-related aftermath: xfce power manager allows/assumes login to handle lid
  - fix:

```
$ xfconf-query -c xfce4-power-manager -p /xfce4-power-
manager/logind-handle-lid-switch -s false
```

- issues when logging out/shutdown
  - may be caused by intel graphics library? i915?
  - can install lightdm - but shutdown/restart always gets login page (=logout)
- wicd feature is an issue for system with multiple users
  - shared wifi password, no option to make private

Cinnamon DE

- login page (lightdm?) - cannot shutdown/reboot! read here...
  - found a fix here
  - i just needed to edit `/etc/pam.d/lightdm-greeter` and changed `pam_systemd.so` to `pam_elogind.so` (but, may cause issues with suspend/hibernate?)
- laptop battery quickly drain below 30 percent
  - setup higher critical value for power management

```
gsettings list-keys org.cinnamon.settings-daemon.plugins.power
gsettings set org.cinnamon.settings-daemon.plugins.power use-time-
for-policy false
gsettings set org.cinnamon.settings-daemon.plugins.power
percentage-low 30
gsettings set org.cinnamon.settings-daemon.plugins.power
percentage-critical 25
gsettings set org.cinnamon.settings-daemon.plugins.power
percentage-action 23
```

  - or use `dconf-editor`

PulseAudio

Youtube videos keep resetting the volume settings to 100%! The culprit is `flat-volumes`. Modify `/etc/pulse/daemon.conf` and set `flat-volumes=no`.

(Re)-Compiling Syslinux

I need to recompile syslinux - just to remind myself, other than the usual development packages (build-essential, etc), I also need `nasm` and `upx-ucl`.

```
apt install nasm and upx-ucl
```

Unwanted Background Program

I found this in my old notes... I somehow found an autostart program `geoclue-demo-agent.desktop`, which I obviously do not need. So, simply remove that from autostart path

```
# rm /etc/xdg/autostart/geoclue-demo-agent.desktop
```

Sound muted on startup on my HP laptop

trying two options found... so far, not successful? keeping this here for reference.

1. option 1:
    - install alsa-utils
    - make sure sound is not muted and set to desired volume level
    - run (as root) alsactl store
2. option 2:
    - edit (as root) /etc/pulse/defaults.pa
        - can also copy this to home folder ??? for 1-user solution...
    - comment out 'load-module module-device-restore'

General Issues

- wifi firmware missing after first restart
    - manually install `firmware-ralink`
- network manager cannot connect using wifi
    - edit /etc/NetworkManager/NetworkManager.conf
    - add

```
[device]
wifi.scan-rand-mac-address=no
```

Using Wine on Devuan

Setup Wine (as root):

- enable multiarch
- install wine and winetricks

```
# apt install wine wine32 winetricks
```

Configure Wine (as user):

- if required, remove previous settings

```
$ rm -rf $HOME/.wine
```

- config for win32

```
$ WINEARCH=win32 winecfg
```

- setup nice fonts

```
$ winetricks corefonts
```

Note: Install `fuseiso` to enable mounting ISO as user

Game: Red Alert 2

Setup Installer ISO:

- create link to ISO as CDROM device

```
$ ln -sf /path/to/install.iso $HOME/.wine/dosdevices/d::
```

- mount ISO

```
$ fuseiso mount  /path/to/install.iso $HOME/.wine/drive_d
```

- create link to mount path as CDROM drive

```
$ ln -sf $HOME/.wine/drive_d $HOME/.wine/dosdevices/d:
```

Run installer

-
```
$ wine D:\\Setup.exe
```

Fixes:

- menu does not show (solution available at WineHQ)
  - download ddraw.dll from https://github.com/CnCNet/ts-ddraw/releases
  - place in RA2 install path
  - run winecfg add that to library (as window native, instead of builtin)

Application: LTSpice

- download windows version from ltspice website and run

```
$ wine /download/path/LTspiceXVII.exe
```

Devuan on Raspberry Pi

Check out here.

RasPi400

Using `rpi-devuan-chimaera-5.10.110-ext4-2022-04-16.zip`

- boots ok (default hostname=bcm2711)
- login (root:toor)
- setup

```
# run-setup
```

- change hostname (edit /etc/hostname and /etc/hosts)
- reboot
- remove default user

```
# userdel -r devuan
```

- most development stuffs i want are preinstalled! yay!
- install vim

```
# apt install vim
```

- remove nano

```
# apt remove nano
```

    - also

```
# rm .nanorc
```

- install xorg stuffs

```
# apt install xorg libx11-dev libxft-dev libxinerama-dev
```

- install suckless stuffs

```
# apt install stterm suckless-tools
```

- create user and login as that user
- get my1shell and my1ubuild

```
# git clone https://codeberg.org/azman/my1shell
# git clone https://codeberg.org/azman/my1ubuild
```

- install `dwm` from source
- install browser & font

```
# apt install surf fonts-liberation2
```

work in progress... 2 issues: {surf cannot validate cert}{reboot hangs}

//**Note:** Will simply use Raspberry Pi OS for now... //

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