Software

1. Install OS
   - Install Linux Mint Debian Edition (LMDE)
     - Choose 'auto login' during installation
   - Uninstall all apps you don't want
   - Fully update
   - Install Zoho and Xymon if desired

2. Connect controller panel and configure buttons
   - https://docs.google.com/document/d/16bazg_-B5EizczUhrTw0yate0fdOuYFfk7lHLpCxOOE/edit?usp=drive_link

3. Download EmulationStation-DE
   https://es-de.org/
   - Download latest Linux AppImage and save to your Home folder
   - Check the 'Allow executing' permissions

4. ES-DE software first run
   - Double-click it.
     - Choose to **Create Directories**
     - Choose **Quit** when finished
     - A ROMS folder was auto created in your home folder that contains a subfolder for all the various systems that ES-DE works with.
   - Open the ROMS folder and delete any folder/emulator that you don't intend to use. If you're unsure about deleting some that you may potentially want later, just leave those folders, because they won't show up as available unless there are game roms in them.
     Keep:
     - atari2600
     - gamegear
     - gb
     - gba
     - gbc
     - genesis
     - nes
     - ps2
     - ps3
     - psp
     - psx (aka ps1)
     - snes
   - An .emulationstation hidden folder was also created in your home folder.
     - This is the location we'll be adding themes and making a few custom edits later
     - Right-click and check 'Show Hidden Files' to see the hidden folders

5. Game bios and game roms
   - Copy bios files for GBA, PS1, PS2, and PS3 into their ROM folder

- ○ Copy game roms into their folders
- ○ PS3 games won't show up in ES-DE until you make shortcuts to each game folder
  - ● Open ROMS> ps3 folder
  - ● Right-click a game folder and choose 'Make Link'
    - (If 'Make Link' is not available just open Edit>Preferences>Context Menus> and enable it)
  - ● Rename the link with the game name you want to appear in ES-DE and give it a **.ps3** extension.
    Mortal Kombat vs DC.ps3

6. <u>Install Emulators</u>
   These do the work of playing games. They each have their own configuration gui where you define everything associated with each game system. All can be installed from the Software Manager

   apt packages
   Stella   Atari2600   (it has a flatpak version, but it's dependencies conflict with Mednaffe for some reason)

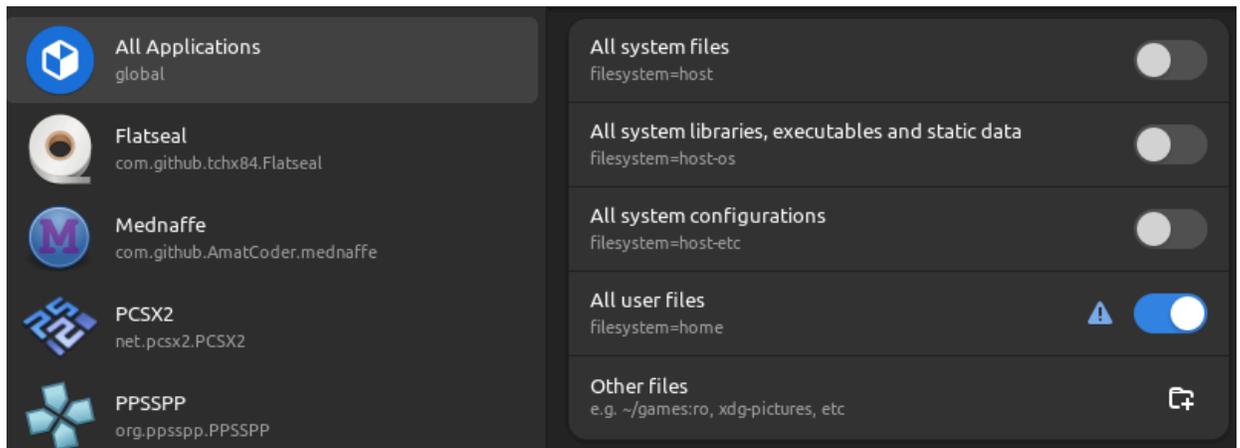   *flatpaks*
   Mednaffe   PS1, GameBoyColor, GameBoyAdvance, GameGear, Nintendo, SuperNES
   PPSSPP   PSP
   PCSX2   PS2 (works smooth at 30% cpu on 8 core system. Works ok with 4 core system)
   RPCS3   PS3 (works smooth at 50% cpu on 8 core system. Crashes with 4 core system)
   Flatseal   Needed to set permissions on Flatpak programs

7. <u>Edit Flatpak permissions</u>
   Open Flatseal and allow permissions to 'All user files'.
   If you don't do this you'll have problems with ES-DE opening roms via it's underlying cli commands.

8. <u>Configure Emulators</u>
   - ○ [Edit graphics and sound settings](#)
   - ○ [Edit controller input settings](#)

9. <u>Test</u> every emulator and make sure everything works as expected with fullscreen and controller mapping. All configs are done directly in each emulator, so if it doesn't work now, it won't work later either.

10. Create launcher for ES-DE.AppImage
   ○ Right-click Desktop and choose 'Create a new launcher here'
   ○ Name it ES-DE
   ○ You'll be linking this shortcut to the AppImage file you previously downloaded. If you ever move or rename that file, this shortcut won't work anymore, so make sure you never move it. If/when the software updates, it will download and overwrite this file.
   ○ Choose 'Yes' when asked to add to the menu. (the new shortcut may not show up in the 'App menu> Other' section until you reboot)
   ○ Open 'App menu> Other' and right-click the ES-DE shortcut you created and 'Add to panel'

11. Set ES-DE to auto start
   ○ Open 'Startup Applications> Add> Choose Application> ES-DE
   ○ Edit the settings and give it a 5 second delay

12. Themes for ES-DE
   https://gitlab.com/es-de/themes/themes-list

   This is the best one. https://github.com/anthonycaccese/immersive-revisited-es-de
   ○ Click 'Code' button and Download Zip.
   ○ Extract the folder into ~/.emulationstation/themes/
   ○ It will then be available to set in ES-DU gui
   ○ Open ES-DE, press Esc>
      ● UI Settings> Theme> Immersive (Revisited)

13. Adjustments to ES-DE
   Press Esc>
   ○ Other Settings> Keyboard Quit Shortcut> F4
   ○ Other Settings> Check for Application Updates> Never
   ○ Other Settings> Enable Alternative Emulators Per Game> Off
   ○ Other Settings> Show Hidden Files and Folders> Off
   ○ Other Settings> Show Hidden Games> Off
   ○ UI Settings> Screensaver Settings>
   ○ UI Settings> Display On-screen Help> Off

14. Define ES-DE gui controls
   Press Esc>
   ○ Input Device Settings> Controller Type> Playstation 1
   ○ Configure buttons

15. Fix emulator settings in es_systems.xml file
   https://docs.google.com/document/d/1goafDFXeZJqRJmudURMVDd2tIzdddoSpLL1o2hGM2GE/edit?usp=drive_link

16. Define emulator that ES-DE uses for each game system
   Press Esc>
   ○ Other Settings> Alternative Emulators>

      atari2600   Stella (Standalone)

gamegear	Mednafen (Standalone)
gb	Mednafen (Standalone)
gba	Mednafen (Standalone)
gbc	Mednafen (Standalone)
nes	Mednafen (Standalone)
ps2	PCSX2 (NoGui)
ps3	RPCS3 Directory (Standalone)
psp	PPSSPP (Standalone)
psx	Mednafen (Standalone)
snes	Mednafen (Standalone)

17. Game covers

Once things are working functionally you can move on to getting all the game cover graphics using the ES-DE built-in 'Scraper' tool.

'Start' button> Menu> Scraper> Scrape from> TheGamesDB
> **Scrape These Games> No Game Image**
> **Scrape These Systems> choose**

Once it's done, look through all the games and see if there's any missing graphics. You can scrape again and manually choose the missing ones.

'Start' button> Menu> Scraper> Other Settings> Interactive Mode> On
'Start' button> Menu> Scraper> Other Settings> Auto Accept Single Game Matches> Off

There's also a special 'per game' menu that gives you fine grained control of each game. Use this to find the individual game covers that aren't correct, hide files that are not games, or even delete game files altogether. .

'Select' button> Edit this Game's Metadata> scroll down to 'Scrape' button

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Notes:
- PS3 emulator normally exits with Alt+F4 instead of Esc like everything else. Remap the Esc key to trigger the 'Pause' function in the RPCS3 options.
  https://wiki.rpcs3.net/index.php?title=Help:Keyboard_Shortcuts
  https://github.com/RPCS3/rpcs3/issues/5681