
RETROPIE

Installing RetroPie

What is RetroPie?

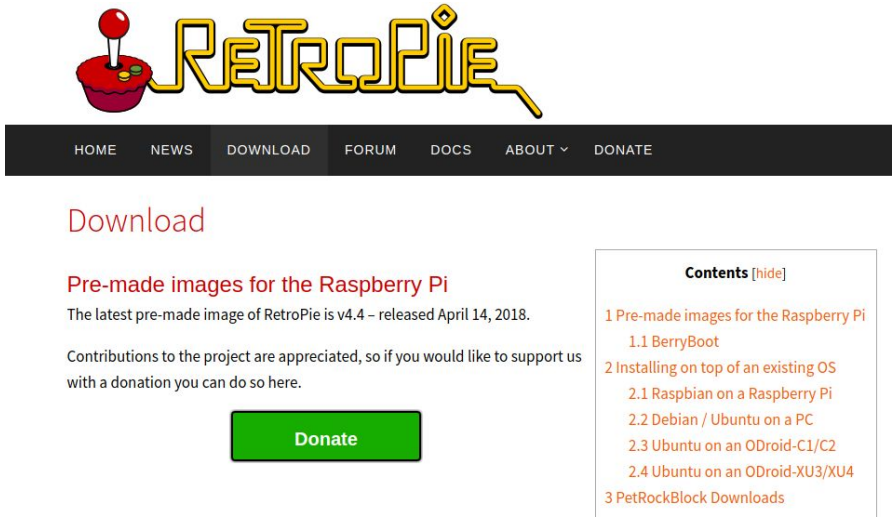
- RetroPie is a bundle of software for emulating “old” games
  - It specializes in being usable by lighter systems

Step 0: Setup your System

- Different RetroPie installs branch sharply based on what you choose to do here
- For this example, we used a RaspberryPie 3 with Raspbian Jessie

Step 1a: Flash the RetroPie Image to an SD Card

- RetroPie distributes RetroPie-compatible Raspbian Images on their web site
- You're Done!



Step 1b: Masochists Read On...

- If you don’t want to use the existing RPI image, you can still install on an existing OS
- Again, these installs have multile options:
  - Build from source and add to OS
  - Script-assisted Jessie Install
- For this demo, we used the script assistance in Jessie
  - Custom-builders, you’re on your own, but you’re used to it by now

Step 2: Update Your Env

- Always do this before trying an install, unless your docs tell you specifically not to

```
sudo apt-get update
sudo apt-get upgrade
```

- You'll also need git, and Debian Jessie required some additional tools

```
sudo apt-get install git lsb-release
```

Step 3: Clone RetroPie Setup Repo

- As seen on https://github.com/RetroPie/RetroPie-Setup

```
git clone --depth=1 \
https://github.com/RetroPie/RetroPie-Setup.git
```

Step 4: Run the Setup Script

- YOU NEED TO RUN THIS CODE WITH PYTHON2

```
Sudo ln -s /bin/python2 /bin/python
```

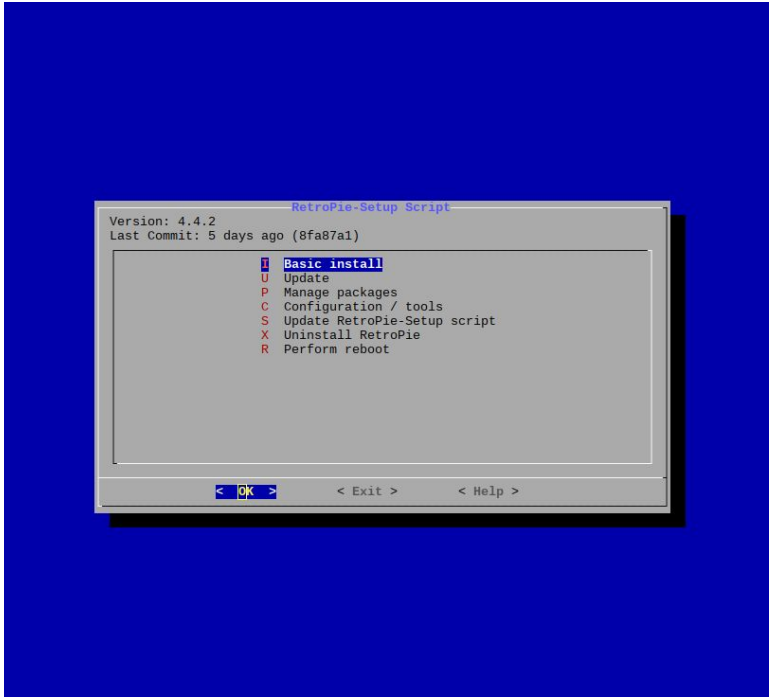
```
alias python=python2
```

- Now make the script executable and run

```
cd RetroPie-Setup
chmod +x retropie_setup.sh
sudo ./retropie_setup.sh
```

Step 5: Trust the Setup Script

- Select Basic Install
  - unless you *really* understand the interdependency of the systems you're working on



Step 6: …

```
  libxfixes-dev libxshmfence-dev libxxf86vm-dev mesa-common-dev
  x11proto-core-dev x11proto-damage-dev x11proto-dri2-dev x11proto-fixes-dev
  x11proto-gl-dev x11proto-input-dev x11proto-kb-dev x11proto-xext-dev
  x11proto-xf86vidmode-dev xorg-sgml-doctools xtrans-dev
Suggested packages:
  libxcb-doc libxext-doc
The following NEW packages will be installed:
  libdrm-dev libdrm-exynos1 libdrm-omap1 libdrm-tegra0 libgl1-mesa-dev
  libpthread-stubs0-dev libx11-dev libx11-doc libx11-xcb-dev libxau-dev
  libxcb-dri2-0-dev libxcb-dri3-dev libxcb-glx0-dev libxcb-present-dev
  libxcb-randr0-dev libxcb-render0-dev libxcb-shape0-dev libxcb-sync-dev
  libxcb-xfixes0-dev libxcb1-dev libxdamage-dev libxdmcp-dev libxext-dev
  libxfixes-dev libxshmfence-dev libxxf86vm-dev mesa-common-dev
  x11proto-core-dev x11proto-damage-dev x11proto-dri2-dev x11proto-fixes-dev
  x11proto-gl-dev x11proto-input-dev x11proto-kb-dev x11proto-xext-dev
  x11proto-xf86vidmode-dev xorg-sgml-doctools xtrans-dev
0 upgraded, 38 newly installed, 0 to remove and 8 not upgraded.
1 not fully installed or removed.
Need to get 6,801 kB of archives.
After this operation, 25.8 MB of additional disk space will be used.
Get:1 http://archive.raspberrypi.org/debian stretch/main armhf mesa-common-dev armhf 13.0.6-1+rpi2 [517 kB]
Get:2 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf xorg-sgml-doctools all 1:1.11-1 [21.9 kB]
Get:3 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf x11proto-core-dev all 7.0.31-1 [728 kB]
Get:4 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libxau-dev armhf 1:1.0.8-1 [23.0 kB]
Get:5 http://archive.raspberrypi.org/debian stretch/main armhf libgl1-mesa-dev armhf 13.0.6-1+rpi2 [41.4 kB]
Get:6 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libxdmcp-dev armhf 1:1.1.2-3 [40.9 kB]
Get:7 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf x11proto-input-dev all 2.3.2-1 [158 kB]
Get:8 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf x11proto-kb-dev all 1.0.7-1 [233 kB]
Get:9 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf xtrans-dev all 1.3.5-1 [100 kB]
Get:10 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libpthread-stubs0-dev armhf 0.3-4 [4,042 B]
Get:11 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libxcb1-dev armhf 1.12-1 [165 kB]
Get:12 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libx11-dev armhf 2:1.6.4-3 [753 kB]
Get:13 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libdrm-omap1 armhf 2.4.74-1 [15.1 kB]
Get:14 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libdrm-exynos1 armhf 2.4.74-1 [18.1 kB]
Get:15 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libdrm-tegra0 armhf 2.4.74-1 [14.5 kB]
Get:16 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libdrm-dev armhf 2.4.74-1 [189 kB]
Get:17 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libx11-xcb-dev armhf 2:1.6.4-3 [185 kB]
Get:18 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libxcb-dri3-dev armhf 1.12-1 [96.1 kB]
Get:19 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libxcb-render0-dev armhf 1.12-1 [108 kB]
Get:20 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libxcb-randr0-dev armhf 1.12-1 [109 kB]
Get:21 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libxcb-shape0-dev armhf 1.12-1 [97.4 kB]
Get:22 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libxcb-xfixes0-dev armhf 1.12-1 [102 kB]
Get:23 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libxcb-sync-dev armhf 1.12-1 [101 kB]
Get:24 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libxcb-present-dev armhf 1.12-1 [97.3 kB]
Get:25 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libxshmfence-dev armhf 1.2-1 [7,152 B]
Get:26 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libxcb-dri2-0-dev armhf 1.12-1 [98.6 kB]
Get:27 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libxcb-glx0-dev armhf 1.12-1 [117 kB]
Get:28 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf x11proto-xext-dev all 7.3.0-1 [212 kB]
Get:29 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf x11proto-fixes-dev all 1:5.0-2 [19.2 kB]
Get:30 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libxfixes-dev armhf 1:5.0.3-1 [22.7 kB]
Get:31 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf x11proto-damage-dev all 1:1.2.1-2 [11.8 kB]
Get:32 http://mirrors.lug.mtu.edu/raspbian/raspbian stretch/main armhf libxdamage-dev armhf 1:1.1.4-2+b1 [13.9 kB]
Get:33 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libxext-dev armhf 2:1.3.3-1 [102 kB]
Get:34 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf x11proto-xf86vidmode-dev all 2.3.1-2 [6,114 B]
Get:35 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libxxf86vm-dev armhf 1:1.1.4-1 [24.8 kB]
Get:36 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf x11proto-dri2-dev all 2.8-2 [18.2 kB]
Get:37 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf x11proto-gl-dev all 1.4.17-1 [28.0 kB]
Get:38 http://mirrors.gigenet.com/raspbian/raspbian stretch/main armhf libx11-doc all 2:1.6.4-3 [2,201 kB]
```

Step 7: You're Done (again...)!

- You can now manipulate modules, run emulators, and play games
- You won't be able to use most of these on systems running Xserver, but again the fix to this is a deeply personal decision

Games on RetroPie: DOSBox

Step 1: Install DOSBox

- Use the retropie_packages script to install DOSBox binaries

```
sudo ./retropie_packages.sh dosbox configure
```

- You're also going to want to set a reasonable clock rate on the DOS VM
  - Clock rate used to matter a ton in games, running at the cycles your machine can give it will probably make it unplayably fast
  - Go to ~/.dosbox and edit the clock setting in the *.conf files to something around 1500

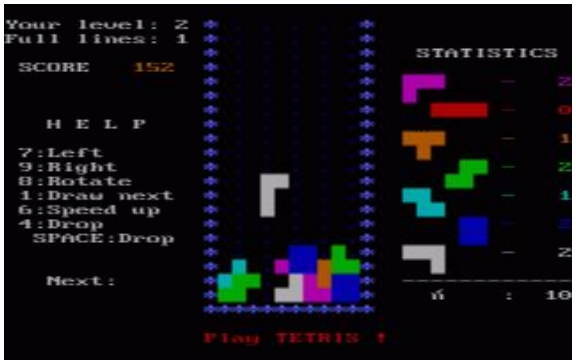
Step 2: install your games

- This part is easier than it sounds
  - Get your executable
  - Place it in the ROM directory of RetroPie

```
mkdir ~/RetroPie/roms/pc/wolf3d
cd ~/RetroPie/roms/pc/wolf3d
<Get binary, place in here>
```

Step 3: Profit

- Launch emulationstation, select DOSBox and start playing



Thanks for Watching!

stay classy, try something new today, and play more games

Sources

- https://retropie.org.uk/
- http://dosonthepi.blogspot.com/2015/01/run-dos-games-in-retropie_15.html