



# Introduction to Puppy Linux: Installation on a USB Flash Disk

*Alex Gotev*

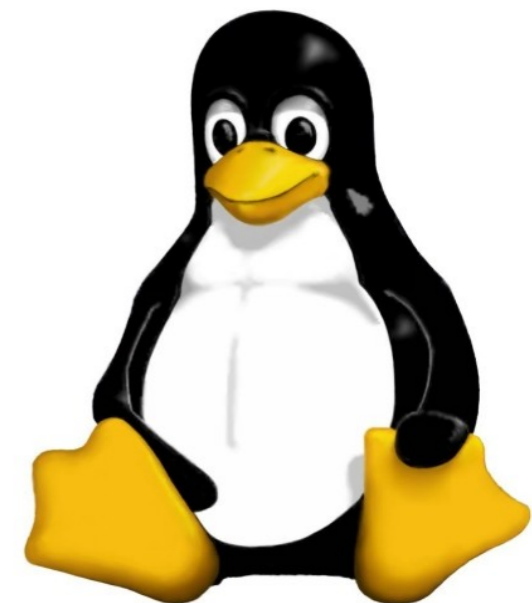


# Contents

- What is Puppy Linux?
- How can I have it?
- How do I boot it?
- What programs does it include?
- Installation on a USB Flash Disk

## What is Puppy Linux?

- Puppy Linux is a GNU/Linux LiveCD distribution developed by Barry Kauler. It's designed to be fast and small. It can be run and installed even on very old hardware (Pentium I) and it's light and portable.
- The entire operating system and all the applications are runned from the RAM (if there's enough on the PC) and this grants great performaces to Puppy Linux.
- Even if it's possibile to install it on the Hard Drive like the other Linux distributions, this is not necessary, because the OS can be used from CD or USB without changing any setting on the host PC's OS.



# How can I have Puppy Linux?

- Go to the official website: <http://www.puppylinux.org>

[puppy linux](#) Login/Register »
 
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**A superb, compact, super-fast and free operating system**

**DOWNLOAD PUPPY LINUX 4.30**  
 Get the latest official version.

**NEW: Multiuser Puppy Linux!**

**NEW TO PUPPY LINUX?**

- Click on “Download Puppy Linux 4.30”

# How can I have Puppy Linux?

- Click on: pup-430.iso and choose where to save the file

The image shows a screenshot of the Puppy Linux website. The website header features the Puppy Linux logo and the text "Puppy Linux small, fast and free OS". Below the header is a navigation menu with links for "Pages", "News and Archives", "Wiki How-To", "Forum", "Downloads", and "Barry's Blog". A blue arrow points from the "Downloads" link to a section titled "Download Latest Release". This section contains the following text: "Download from ibiblio.org: pup-430.iso or explore", "Download from nluug.nl: pup-430.iso or explore", "MD5 Checksum: e18650d38c4185a4b7077...", and "ISO Size: 105MB". Below this text is a desktop environment with various application icons. Overlaid on the right side of the screenshot is a dialog box titled "Apertura di pup-430.iso". The dialog box contains the following text: "È stato scelto di aprire", "pup-430.iso", "che è un: WinRAR archive", "da: ftp://distro.ibiblio.org". Below this is a section titled "Che cosa deve fare Firefox con questo file?" with three radio button options: "Aprirlo con WinRAR (predefinita)", "Salva file" (which is selected), and "Da ora in avanti esegui questa azione per tutti i file di questo tipo." At the bottom of the dialog box are "OK" and "Annulla" buttons.

## How can I have Puppy Linux?

- After you have downloaded the file, open it with your favourite CD burning program:



CDBurnerXP, freeware, website: <http://cdburnerxp.se>



ImgBurn, freeware, website: <http://www.imgburn.com>



Nero, shareware, website: <http://www.nero.com>

- Burning CD Examples with CDBurnerXP and Nero

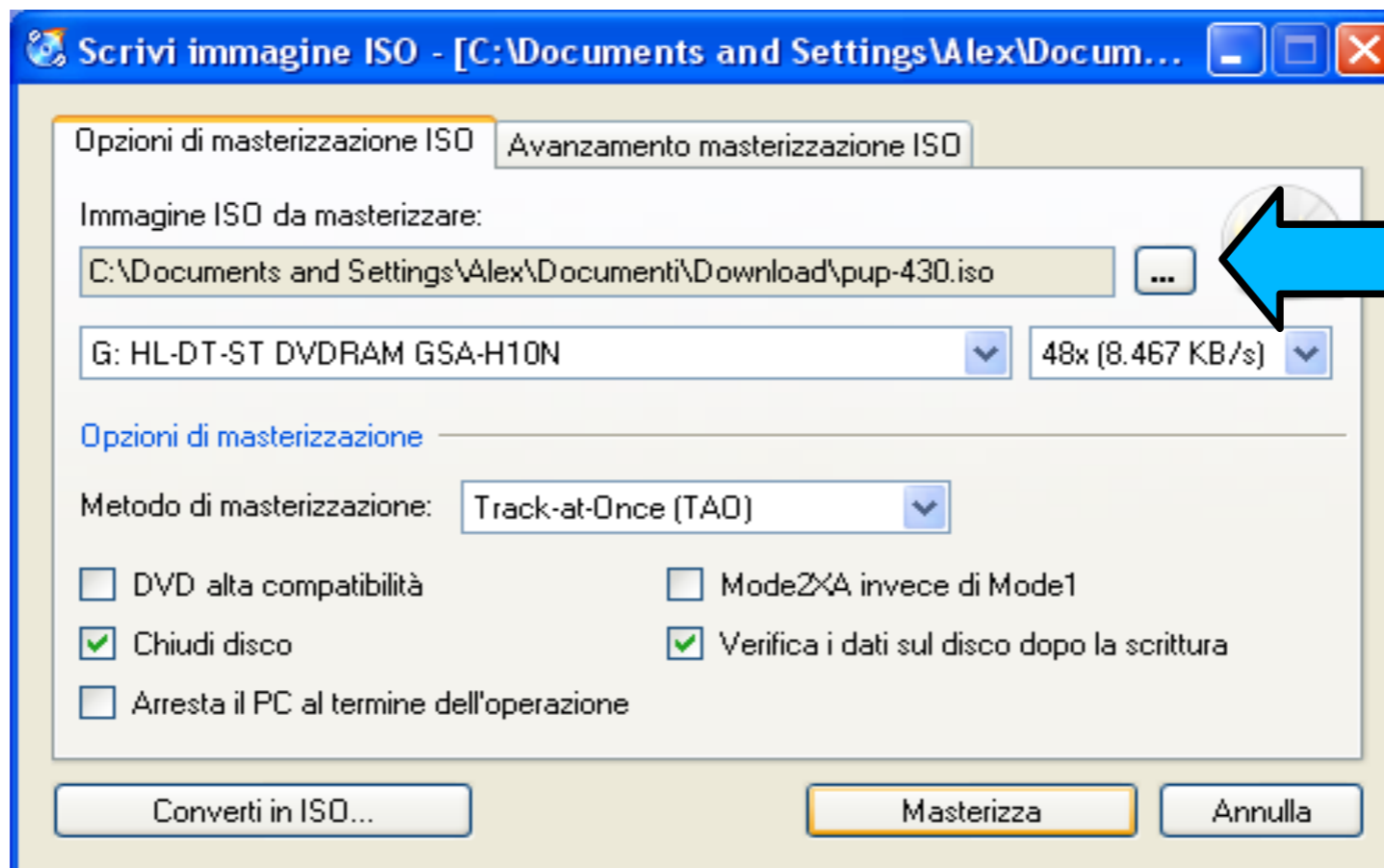
# Burning Puppy CD with CDBurnerXP

- Open CDBurnerXP from Start menu or from its desktop icon. Select “Burn ISO image” and click on OK



# Burning Puppy CD with CDBurnerXP

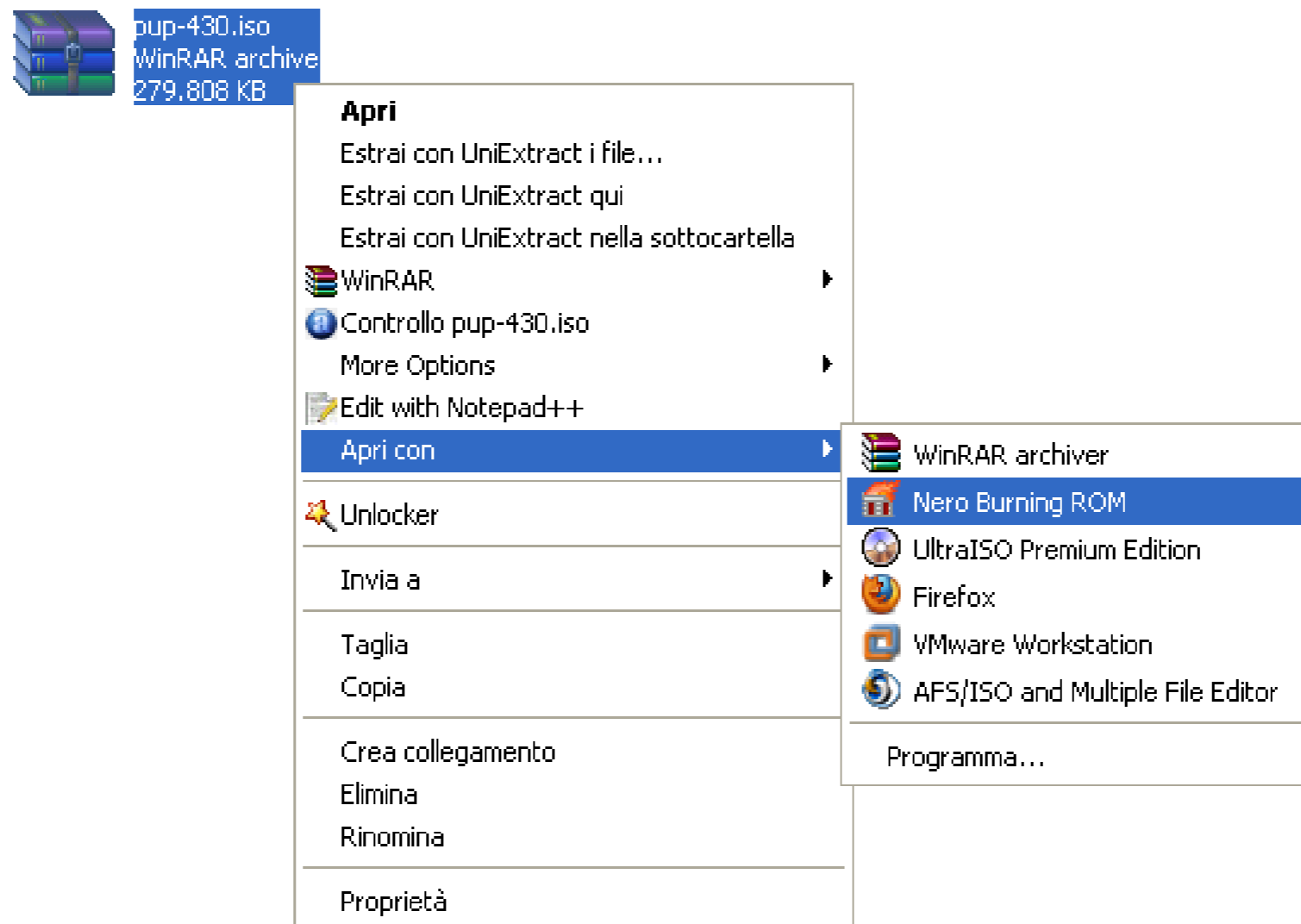
- Click on the button “...”
- A Dialog window will be opened asking you for the Puppy ISO file that we have downloaded. Find where you have saved it, select it and confirm by clicking on OK
- Insert an empty CD in your burning device and click on “Burn”



Select from here the file that we have downloaded

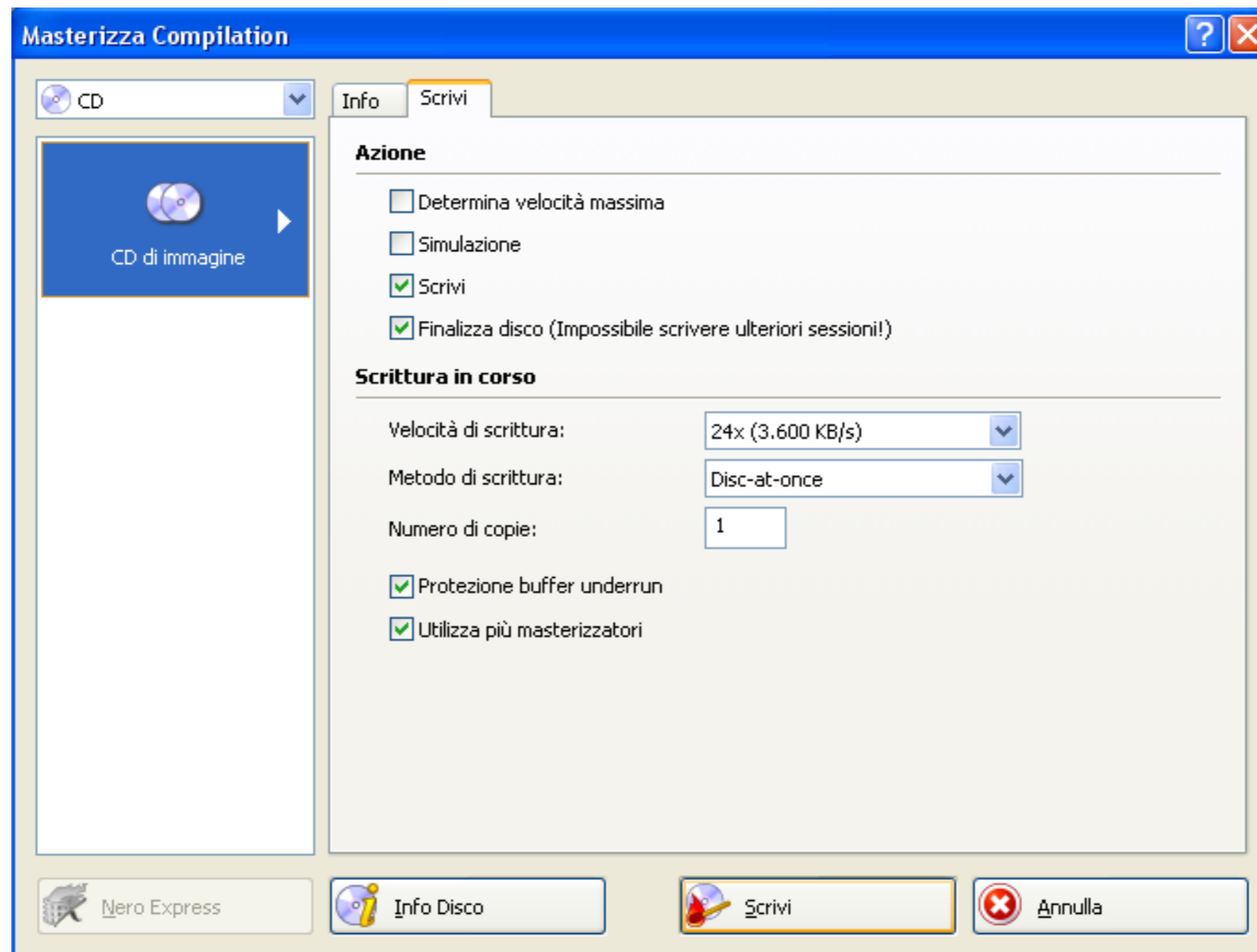
# Burning Puppy CD with Nero

- Right-click on the ISO file that we have downloaded and choose Open With.. > Nero Burning ROM from the menu



# Burning Puppy CD with Nero

- Insert an empty CD in your CD/DVD burner and click on “Write”

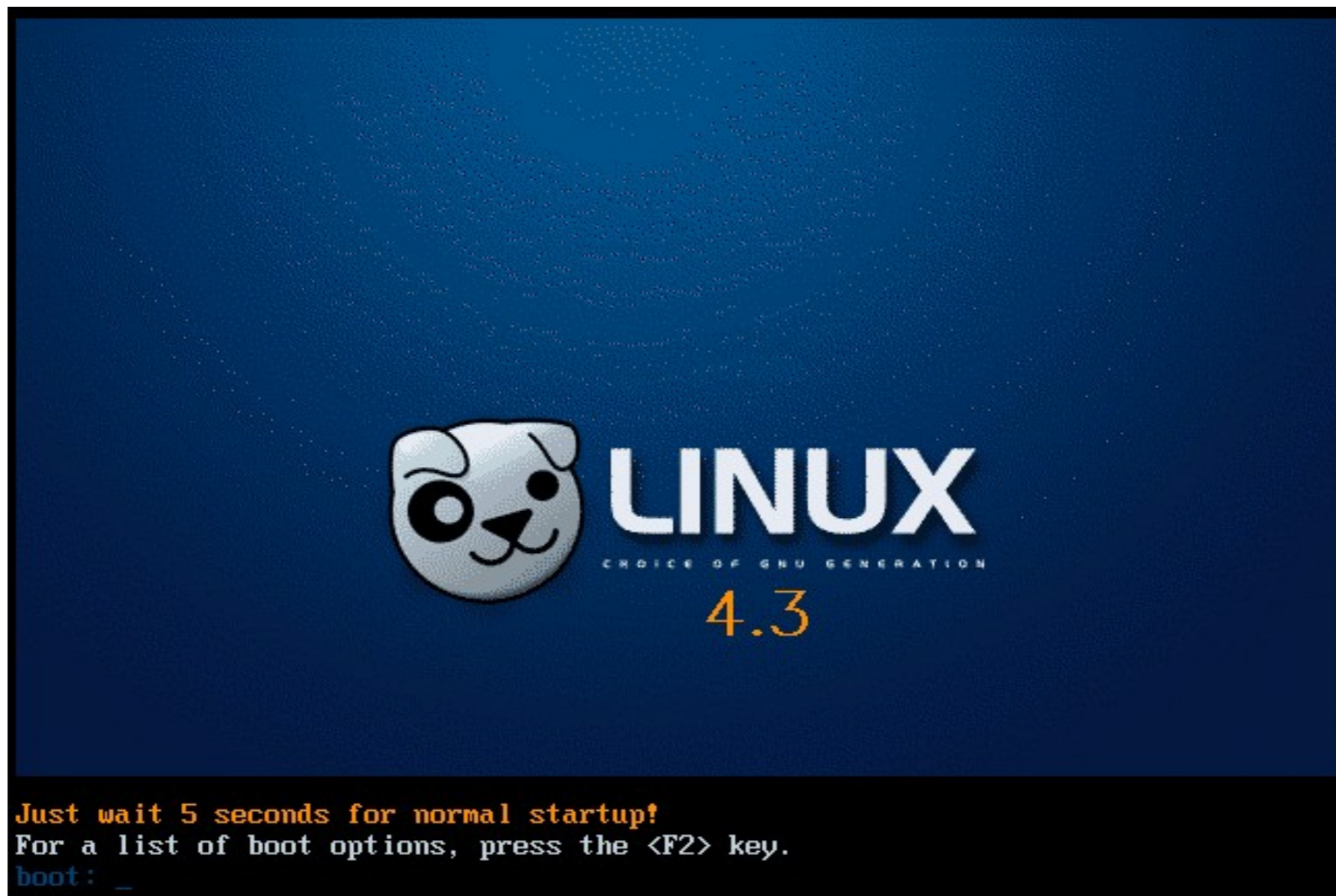


## Boot Puppy Linux from CD

- Insert the previously burned Puppy Linux CD to your CD/DVD Rom reader and reboot your PC
- After the “beep” of the PC if a message similar to this is shown: “Press any key to boot from CD...”, press a key
- If nothing is shown or if the OS installed on the PC boots automatically, you have to setup the boot-up device priority in your BIOS. For more information on how to do this, visit: <http://www.hiren.info/pages/bios-boot-cdrom>

# Boot Puppy Linux from CD

- If all the settings of the PC are correct, once you have rebooted it you will see this:



# Boot Puppy Linux from CD

- After a series of command line messages, a dialog like this will be shown on the screen, asking you to select your keyboard layout. Use the arrow keys to scroll the list until you find your layout. Once you're done, press ENTER to continue

```
Select the keyboard layout:
(UP/DOWN arrows then ENTER key)
↑(-)
croat      qwertz (Croatia)
cz-lat2    qwerty (Czech)
cz-us-qwertz  qwertz (Czech)
de         qwertz (Germany)
defkeymap  qwerty
dk         qwerty (Denmark)
dvorak     dvorak
es         qwerty (Spain)
fi         qwerty (Finland)
fr         azerty (France)
hu         qwertz (Hungary)
hu101     qwerty (Hungary)
il         qwerty (Israel)
is-latin1  qwerty (Iceland)
it         qwerty (Italy)
jp106     qwerty (Japan)
↓(+)
```

< **OK** >

## Boot Puppy Linux from CD

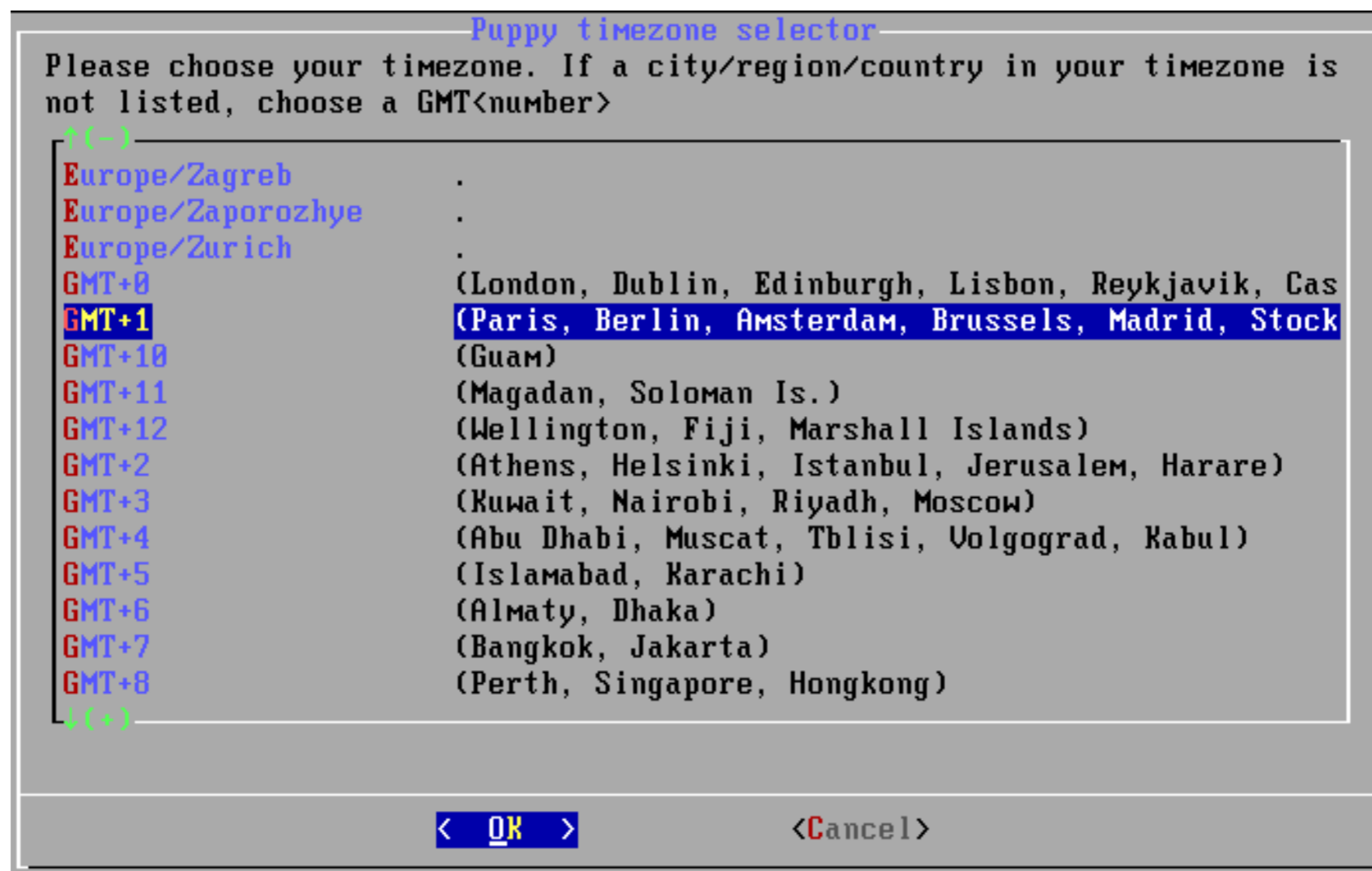
- Next, you will be asked to select the localization for your country. Scroll the list until you find yours and press ENTER.

```
Country setup
The locale setting provides money, date and font
localization for your country. The current choice is
en_US. Make a choice to suit your country...
↑(-)
ha_NG
he_IL          Hebrew, Israel
hi_IN          Hindi, India
hr_HR          Croatian, Croatia
hsb_DE         Germany
hu_HU          Hungarian, Hungary
hy_AM          Armenian
id_ID          Indonesian, Indonesia
ig_NG
ik_CA          Canada
is_IS          Icelandic, Iceland
it_CH          Italian, Switzerland
it_IT          Italian, Italy
it_IT@euro    Italian, Italy
iu_CA          Canada
↓(+)
```

< **OK** >                      <Cancel>

# Boot Puppy Linux from CD

- Select the timezone of your country. Press ENTER to continue



# Boot Puppy Linux from CD

- Video configuration: press ENTER to continue

```
Puppy Video Wizard
Welcome to the Puppy Video Wizard!

Puppy has two X servers (to run Puppy in graphics mode):
Xvesa: A very small and simple "Kdrive" X server.
Xorg:  A very large and sophisticated X server.

Xvesa works flawlessly on most video hardware, simple to configure,
but one major disadvantage is that screen refresh rate is fixed.
Also, Xvesa has limited support for input devices, and lacks features
like hardware-acceleration (video may be jerky on slow PCs).

It is recommended that you choose the <Xorg> button now, but some
quirky video hardware does not work with Xorg, in which case you can
run this Wizard again and choose the <Xvesa> button.

Press ENTER for Xorg probing will take several seconds...
Press TAB (or right-arrow) key then ENTER key for Xvesa...

<Xorg >          <Xvesa>
```

# Boot Puppy Linux from CD

- Video configuration: select your preferred resolution from the dialog (the most common are 800x600 and 1024x768). Press ENTER to continue

```

Puppy Video Wizard
Please use the UP/DOWN ARROW keys to select a video mode. Choices are
shown in the format WidthxHeightxBits, where Width and Height are
screen resolution in pixels, 16/24 bits = 65,536/16,777,216 colors.

CANNOT DECIDE? ...800x600x16 is suggested as a good choice.
RECOMMENDATION: Choose <TEST> button to verify it works!

OK:      Just press ENTER key to immediately use the selected mode...
TEST:    TAB key then ENTER to test and debug the mode before using it...
EXIT:    Exit to text-mode console, do not start X...

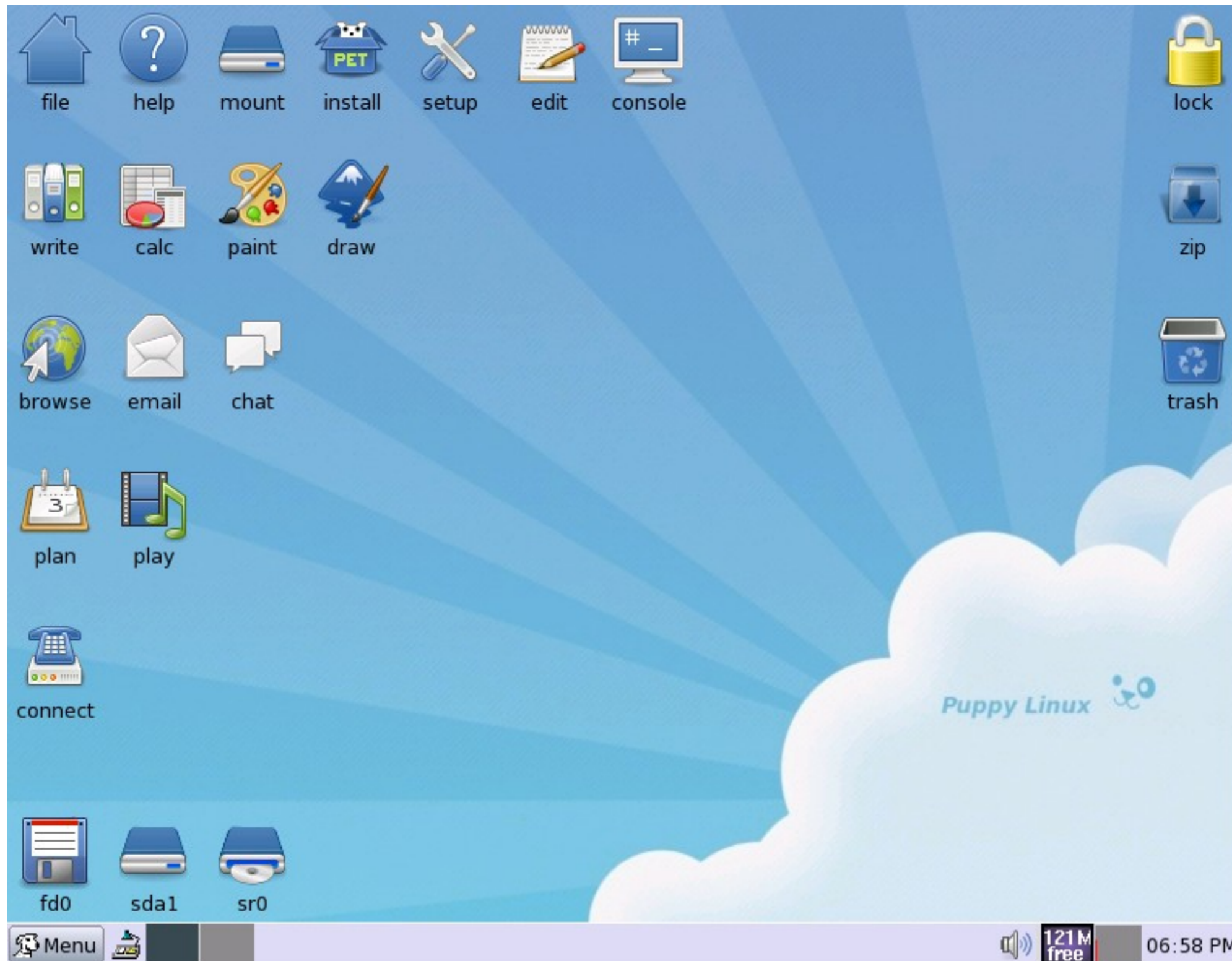
^(-)
1024x600x16  Unconfirmed for monitor, maybe NOT OK for card
1024x600x24  Unconfirmed for monitor, maybe NOT OK for card
1024x768x16  Unconfirmed for monitor, OK for video card
1024x768x16  Unconfirmed for monitor, OK for video card
1024x768x24  Unconfirmed for monitor, OK for video card
1152x864x16  Unconfirmed for monitor, OK for video card
1152x864x24  Unconfirmed for monitor, OK for video card
1280x1024x16 Unconfirmed for monitor, OK for video card
v(+)

< OK >      < TEST >      < EXIT >

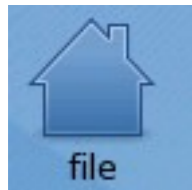
```

All the configurations are done!!  
Are you ready to see Puppy Linux?

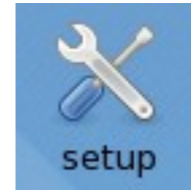
# Puppy Linux's Desktop



# Main programs of Puppy Linux



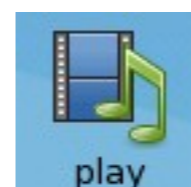
File Browser



Puppy Linux's control panel



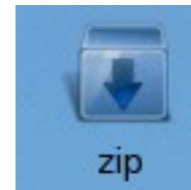
Internet browser  
(SeaMonkey)



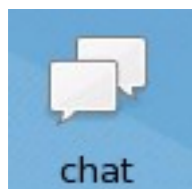
MediaPlayer for audio and video



Mail client  
(similar to OutlookExpress)



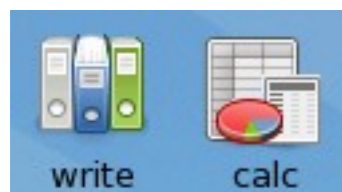
Compressed archives manager (ZIP, RAR, TAR, ...)



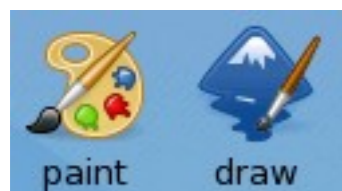
Chat program compatible with the standards of:  
MSN, Yahoo, ICQ, ...



Add/Remove applications



Word and Excel substitutes,  
compatible with MS Office standards



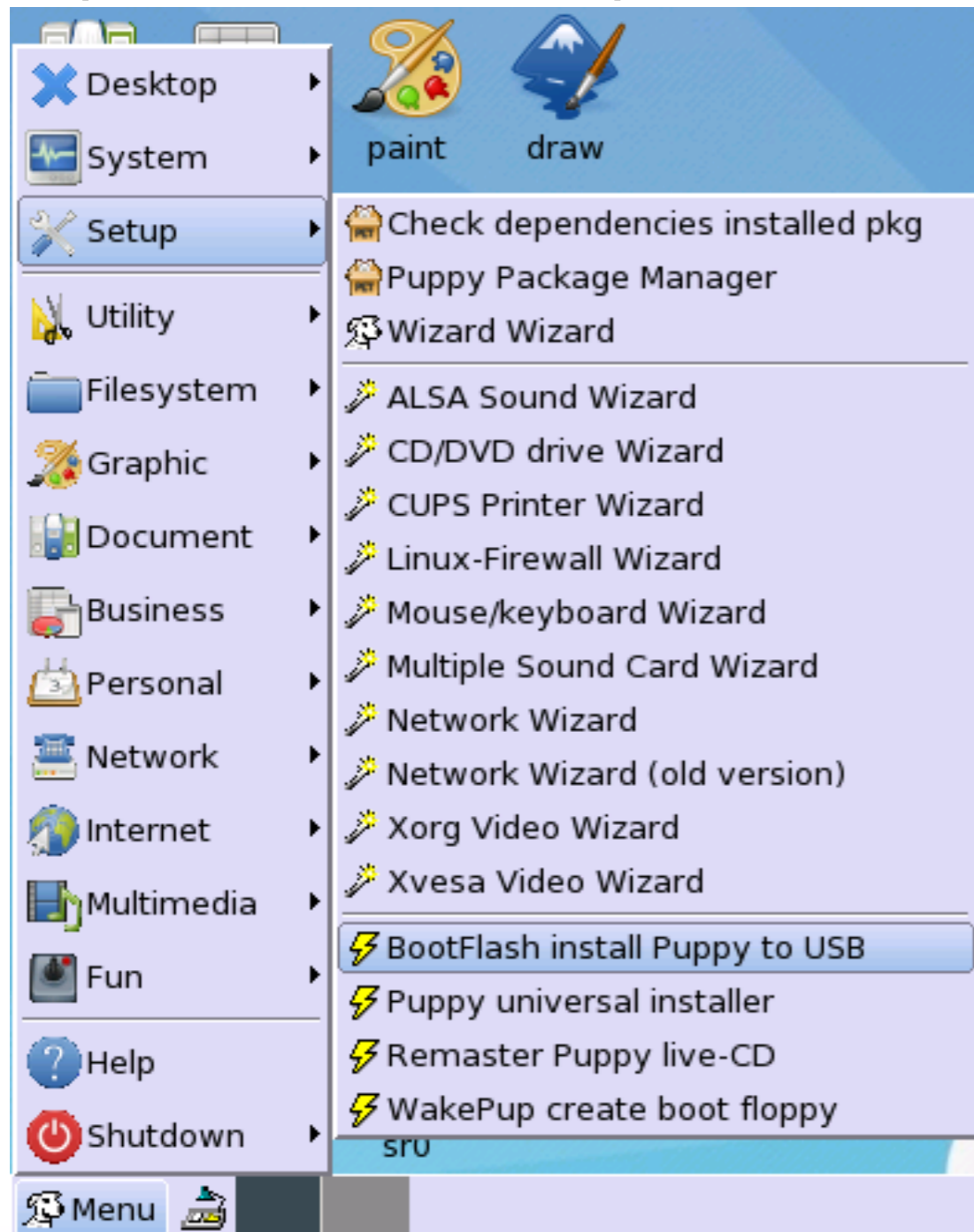
Two graphic programs: the 1<sup>st</sup> is similar to MS Paint with some additions and the 2<sup>nd</sup> is a light version of Inkscape

# Install Puppy Linux on a USB Flash Disk

(in about 5 minutes!)

# Installing Puppy on USB Flash Disk - 1

- Open Menu>Setup>BootFlash install Puppy to USB



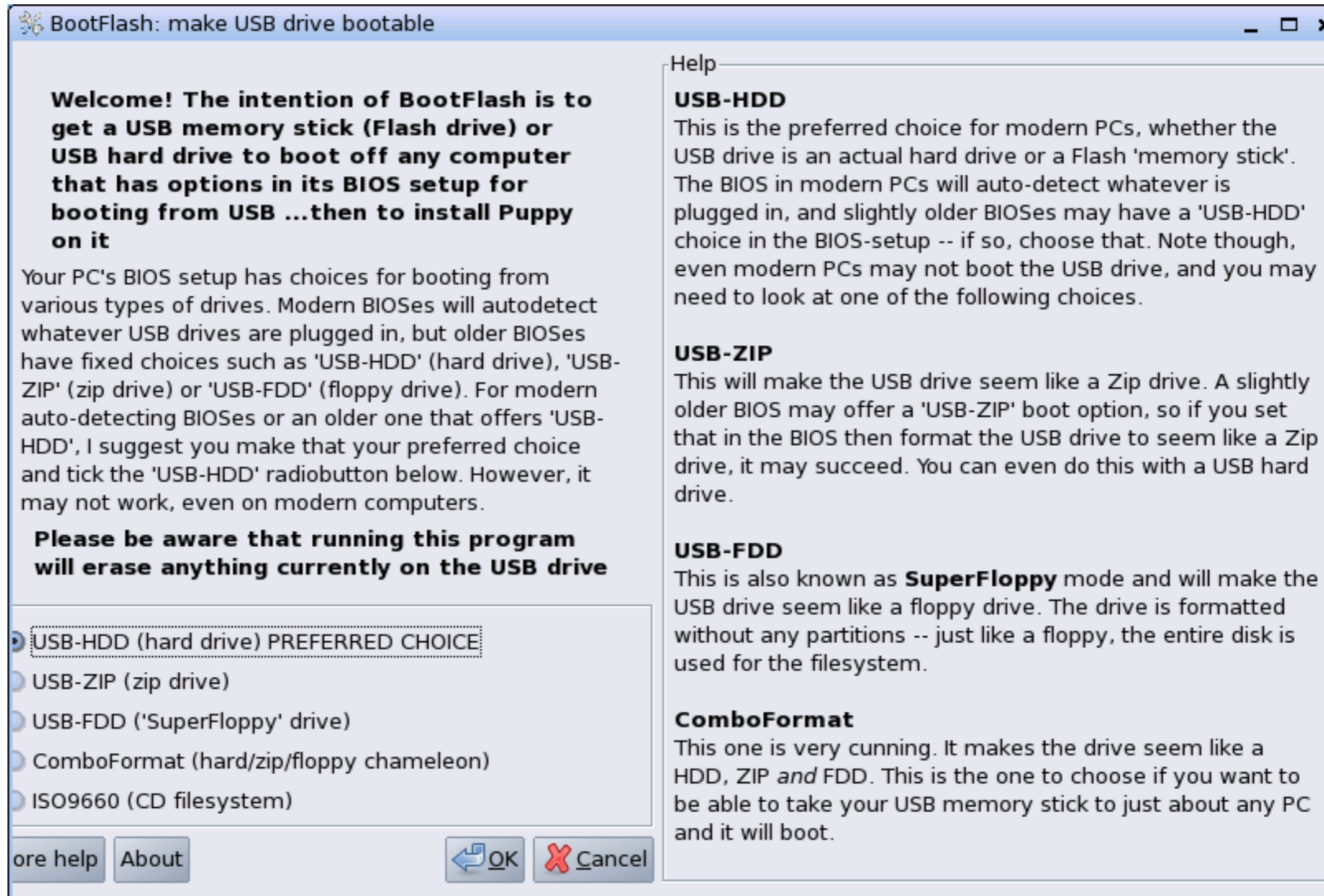
The program that we have launched will format the USB drive and will make it bootable

## WARNING!

Save all the data that are present on the USB Drive first, because everything will be erased from it!

# Installing Puppy on USB Flash Disk - 2

- Select USB-HDD (hard drive) and press OK

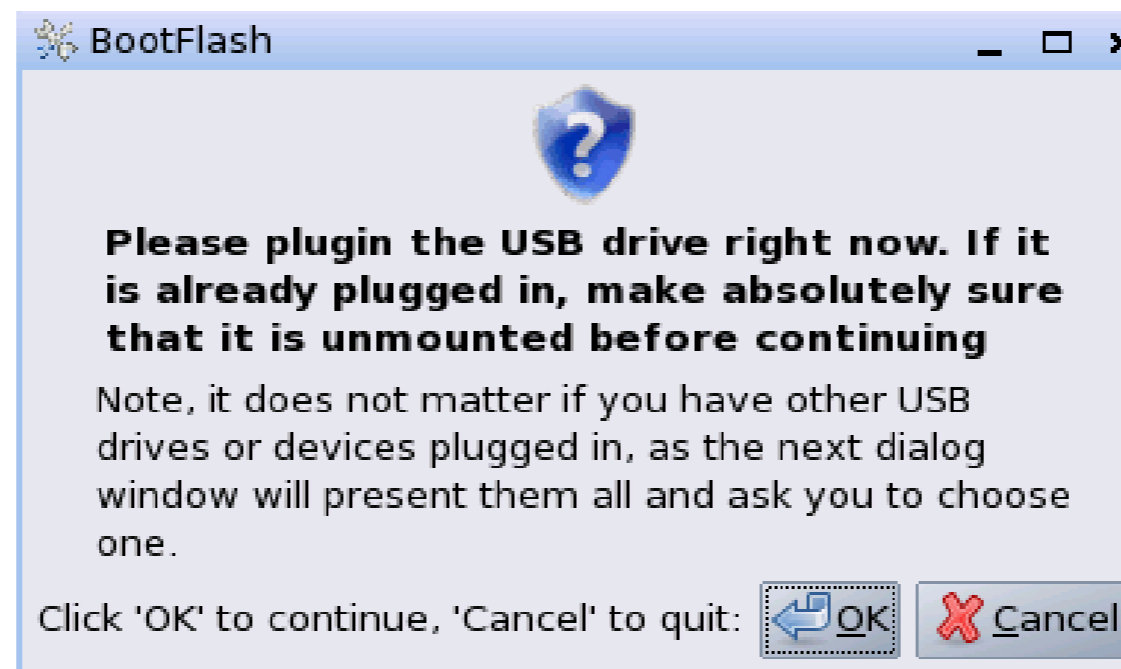


## Installing Puppy on USB Flash Disk - 3

- Insert the USB drive in one of your USB ports and wait until it's been recognized:

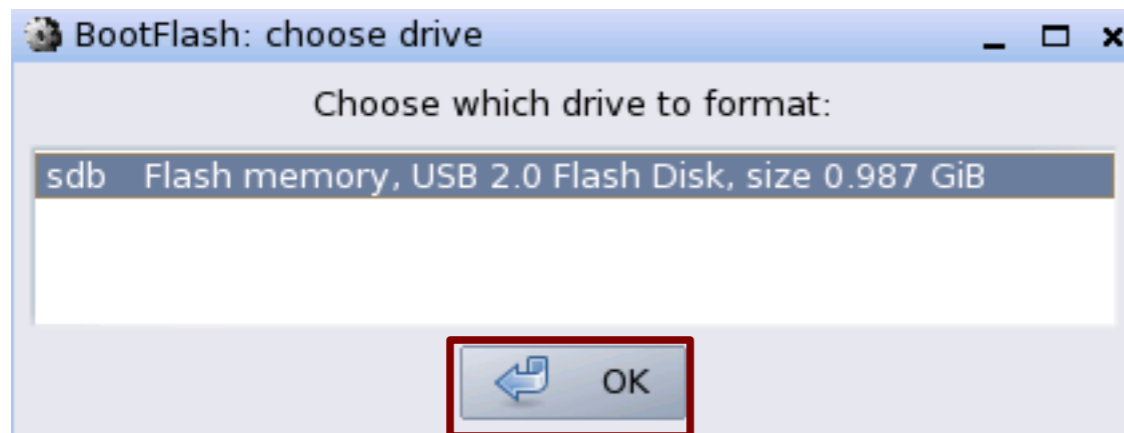


- Next, press OK to continue




# Installing Puppy on USB Flash Disk - 4

- Select the USB Flash Disk from the list and click on OK on the two windows to continue.



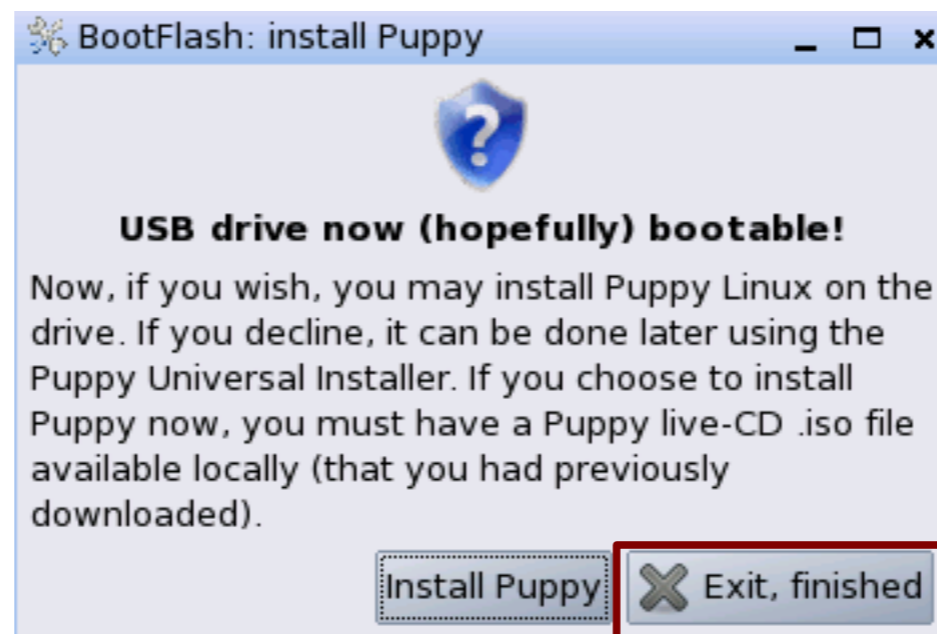
# Installing Puppy on USB Flash Disk - 5

- Wait until the formatting ends



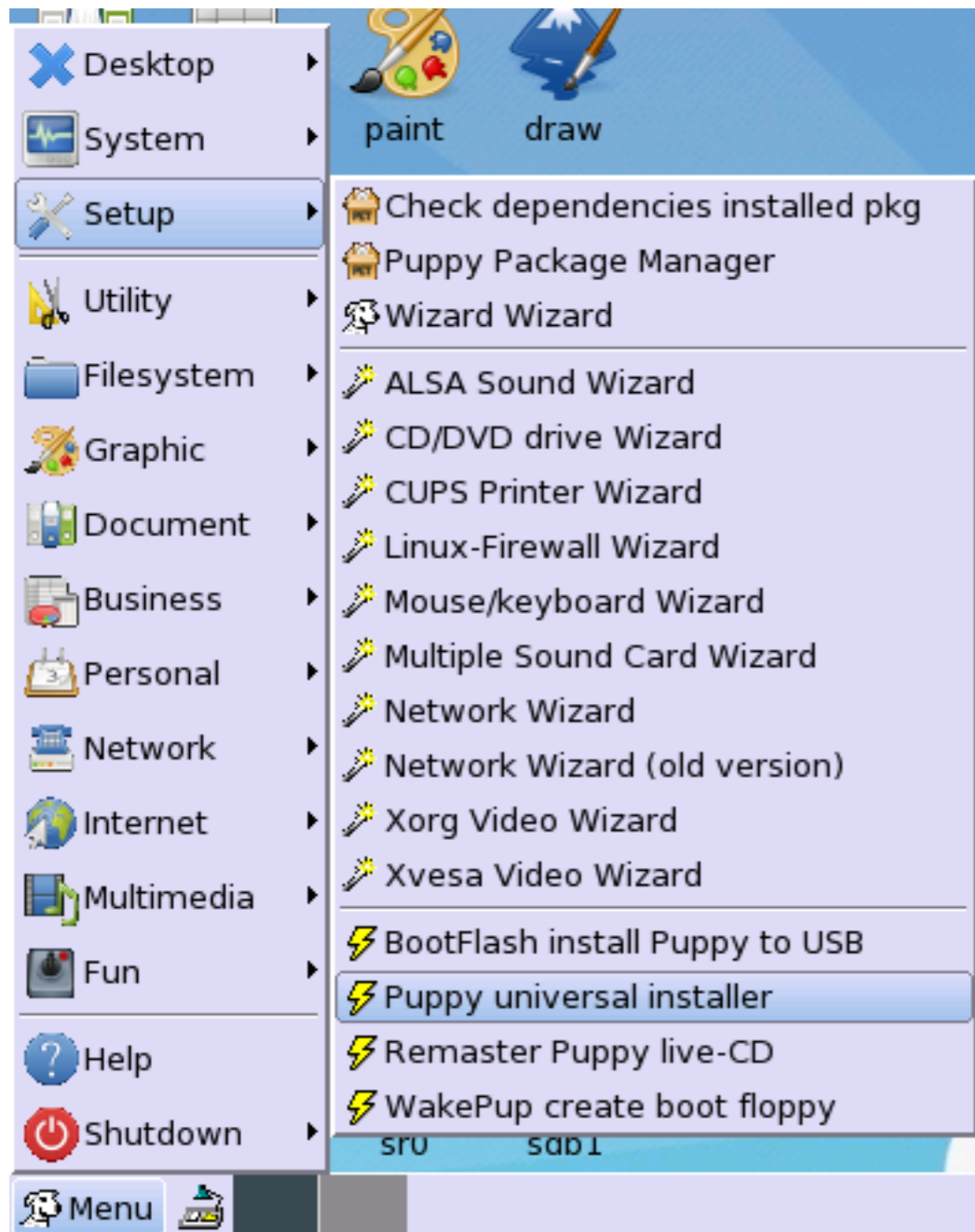
```
Please wait, formatting sdb drive..
```

- Next, click on “Exit, finished” to exit from the USB formatting application



# Installing Puppy on USB Flash Disk - 6

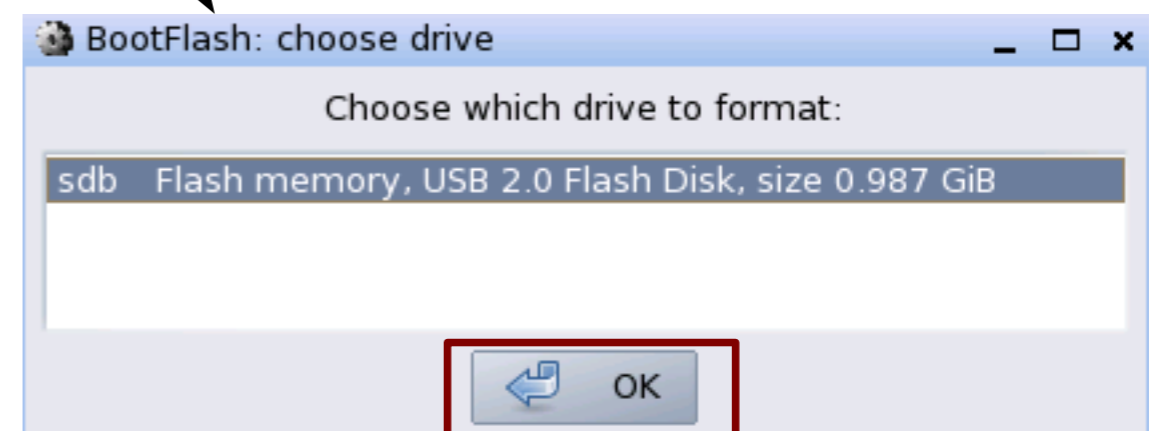
- Open Menu>Setup>Puppy Universal Installer



With the Universal Installer we can install Puppy Linux to almost any device. In this case we will use it to copy the system files to the already formatted and bootable USB Flash Disk that we've created

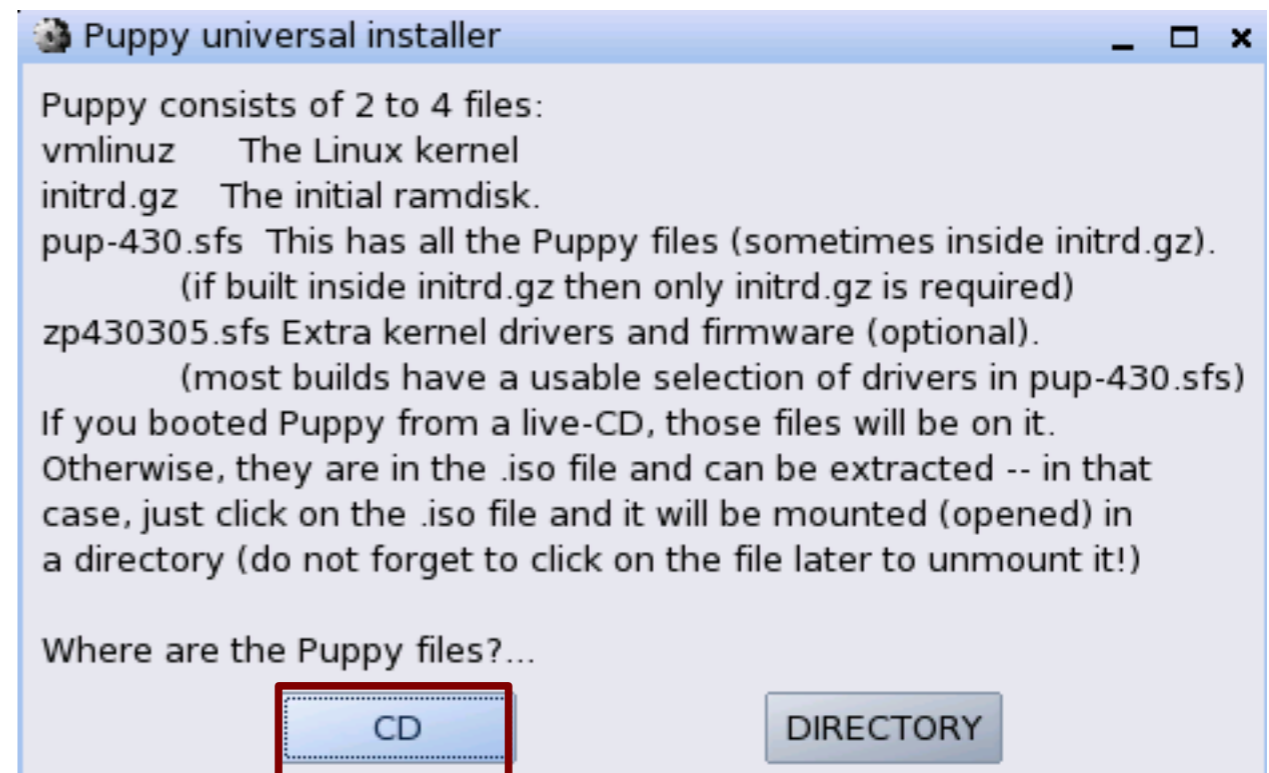
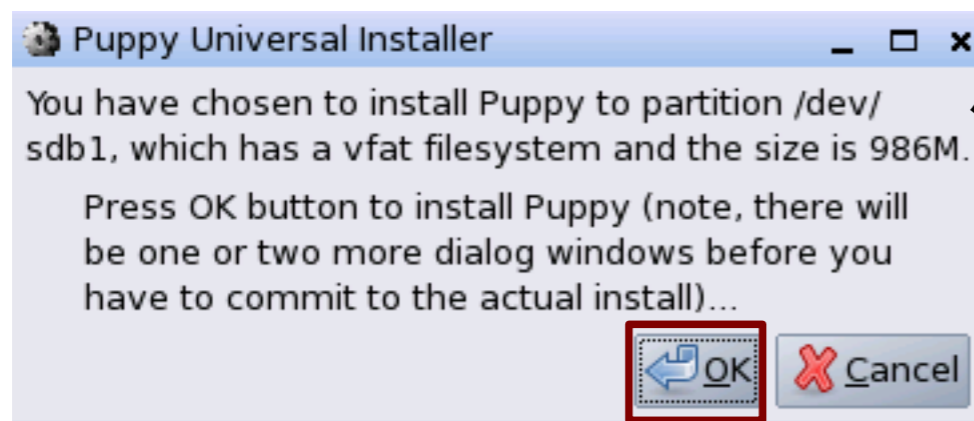
# Installing Puppy on USB Flash Disk - 7

- Select “USB Flash Drive” from the list and click on OK. On the next window that will appear click OK to confirm and continue



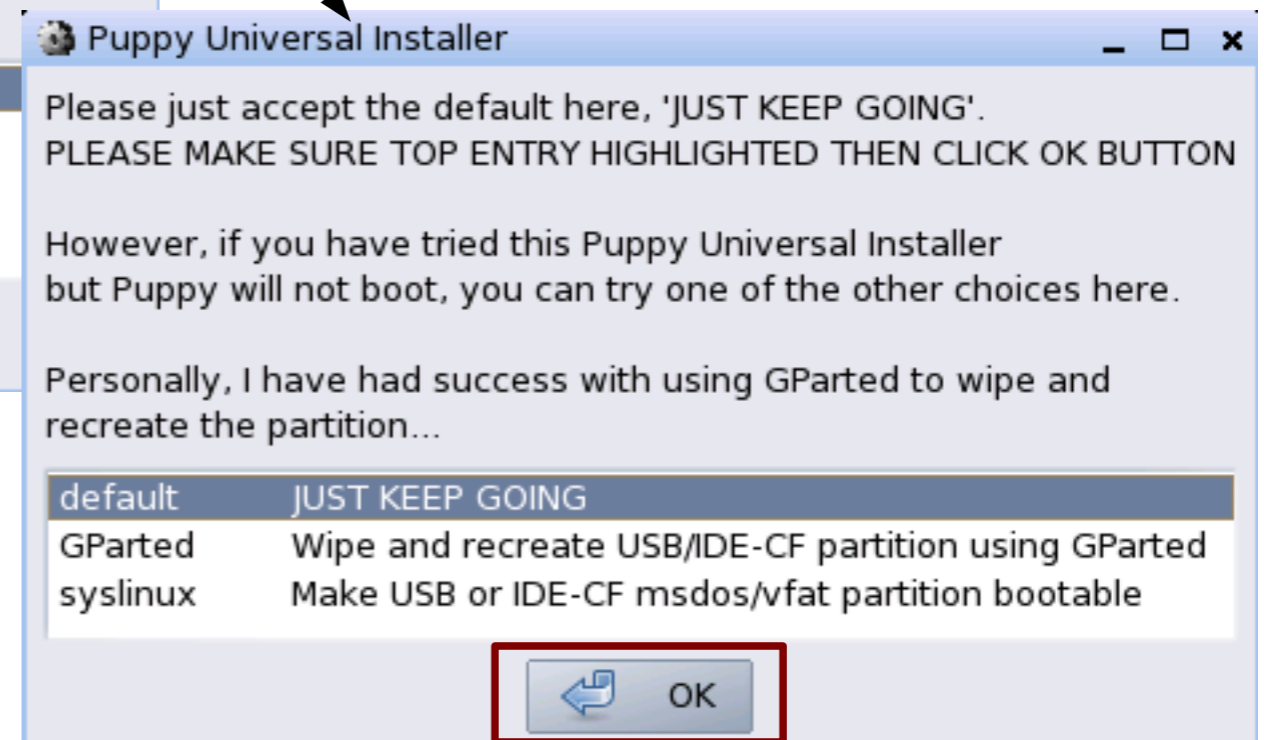
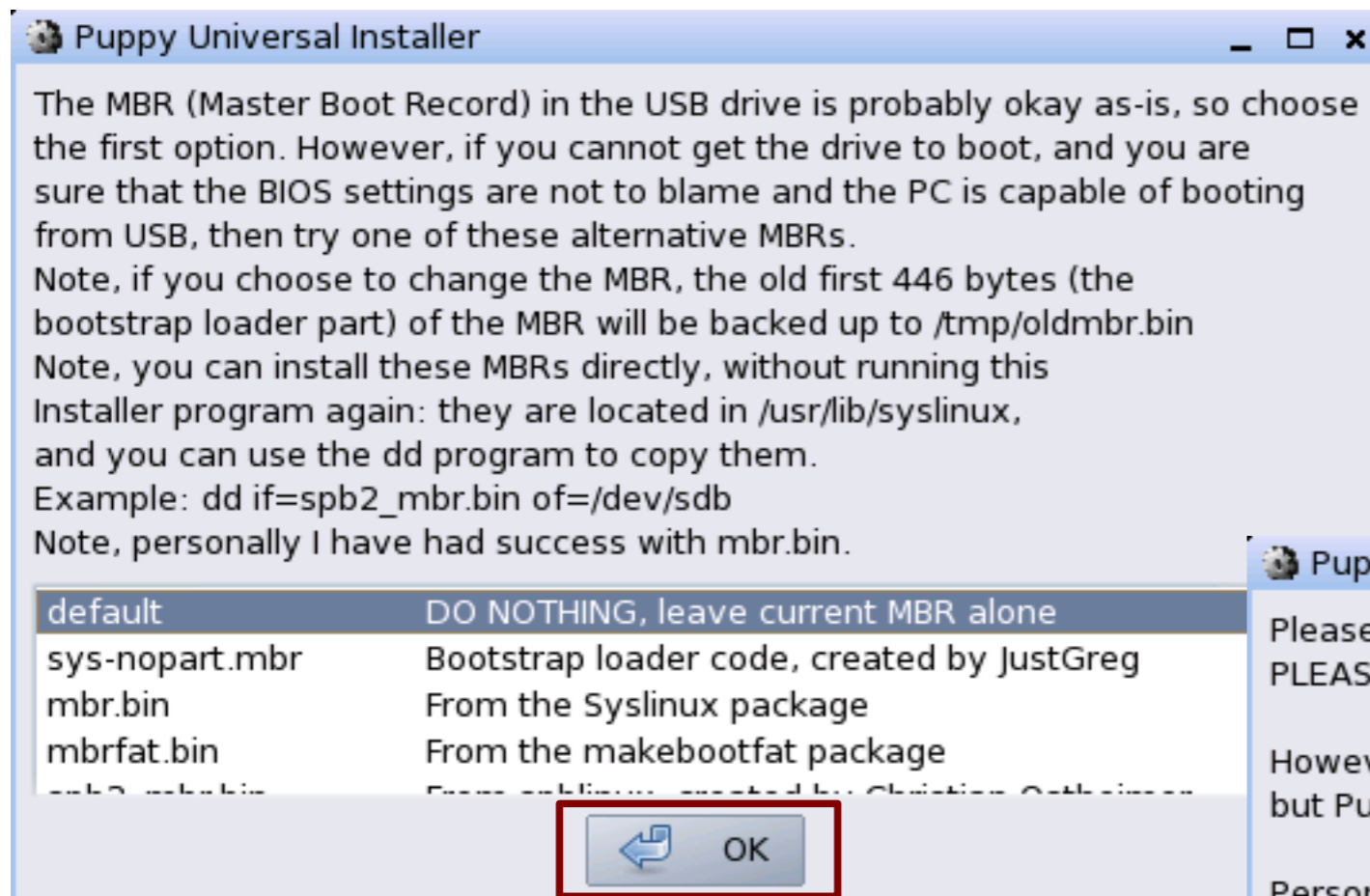
## Installing Puppy on USB Flash Disk - 8

- Click on OK to confirm the installation. On the next window that will appear, click on "CD" to tell the installer to copy Puppy system files directly from the LiveCD



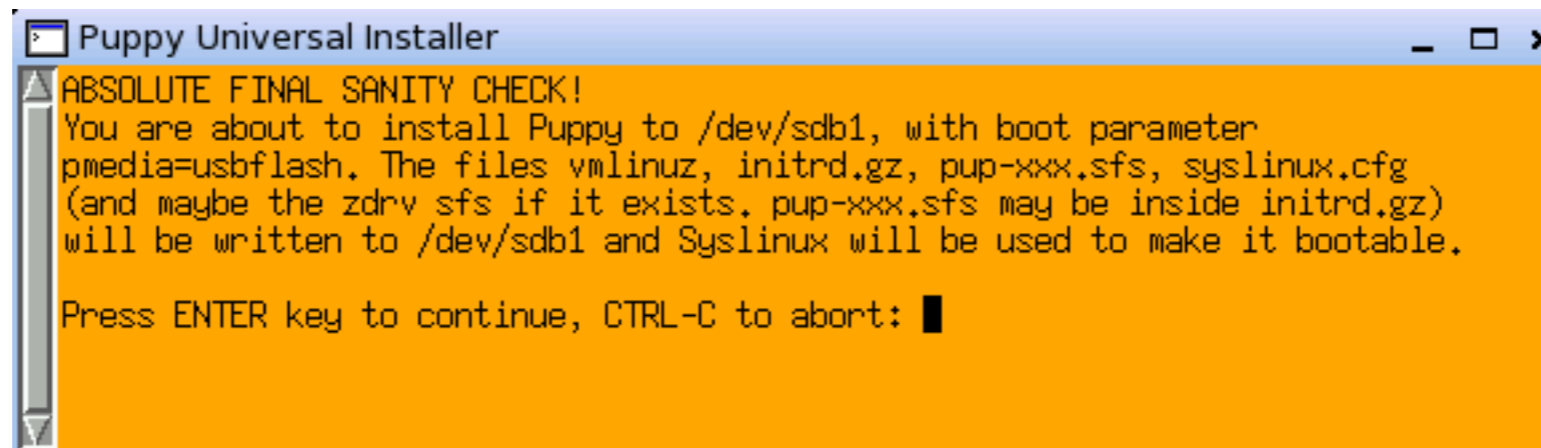
# Installing Puppy on USB Flash Disk - 9

- Click on OK on the following two windows to start the default installation for USB devices



## Installing Puppy on USB Flash Disk - 10

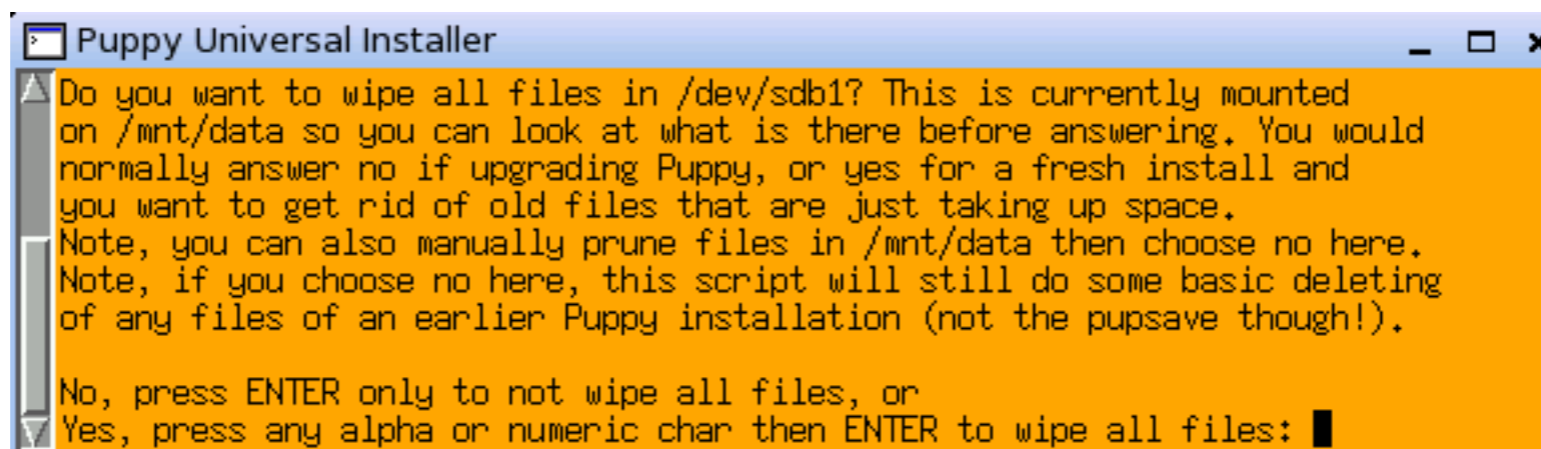
- Click on the terminal window and then press ENTER to begin the final installation procedure



```
Puppy Universal Installer
ABSOLUTE FINAL SANITY CHECK!
You are about to install Puppy to /dev/sdb1, with boot parameter
pmedia=usbflash. The files vmlinuz, initrd.gz, pup-xxx.sfs, syslinux.cfg
(and maybe the zdrv sfs if it exists, pup-xxx.sfs may be inside initrd.gz)
will be written to /dev/sdb1 and Syslinux will be used to make it bootable.

Press ENTER key to continue, CTRL-C to abort: █
```

- Press ENTER again to continue without erasing anything from the USB that we have already prepared



```
Puppy Universal Installer
Do you want to wipe all files in /dev/sdb1? This is currently mounted
on /mnt/data so you can look at what is there before answering. You would
normally answer no if upgrading Puppy, or yes for a fresh install and
you want to get rid of old files that are just taking up space.
Note, you can also manually prune files in /mnt/data then choose no here.
Note, if you choose no here, this script will still do some basic deleting
of any files of an earlier Puppy installation (not the pupsave though!).

No, press ENTER only to not wipe all files, or
Yes, press any alpha or numeric char then ENTER to wipe all files: █
```

# Installing Puppy on USB Flash Disk - 11

- If we want to set Puppy to work by default with less than 256MB of RAM, press ENTER. Otherwise, type in a random letter from the keyboard and press ENTER(recommended).

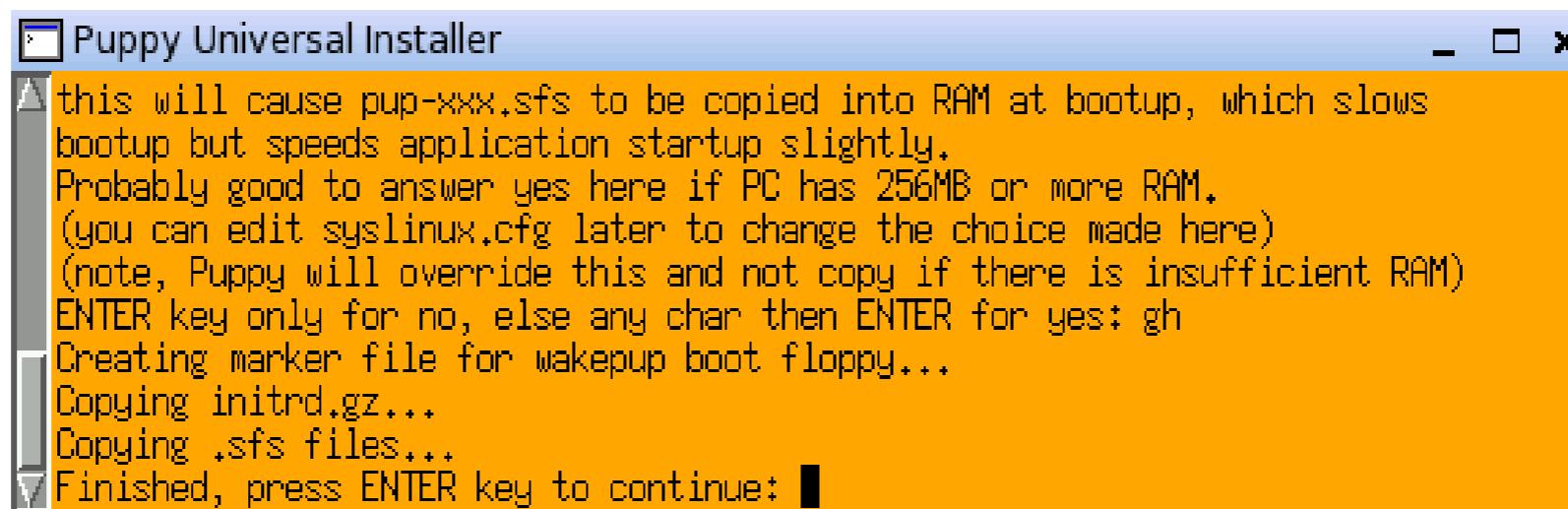
Typing in a letter and pressing ENTER will set Puppy to automatically choose the best RAM option according to the amount of RAM of the host PC

```

Puppy Universal Installer
Copying vmlinuz...
Creating syslinux.cfg...
Would you like syslinux.cfg to have pfix=copy boot parameter?
this will cause pup-xxx.sfs to be copied into RAM at bootup, which slows
bootup but speeds application startup slightly.
Probably good to answer yes here if PC has 256MB or more RAM.
(you can edit syslinux.cfg later to change the choice made here)
(note, Puppy will override this and not copy if there is insufficient RAM)
ENTER key only for no, else any char then ENTER for yes: █
    
```

## Installing Puppy on USB Flash Disk - 12

- When the installation will be finished, press ENTER



```
Puppy Universal Installer
this will cause pup-xxx.sfs to be copied into RAM at bootup, which slows
bootup but speeds application startup slightly.
Probably good to answer yes here if PC has 256MB or more RAM.
(you can edit syslinux.cfg later to change the choice made here)
(note, Puppy will override this and not copy if there is insufficient RAM)
ENTER key only for no, else any char then ENTER for yes: gh
Creating marker file for wakeup boot floppy...
Copying initrd.gz...
Copying .sfs files...
Finished, press ENTER key to continue: █
```

- **The installation is finished!** Now you're ready to go anywhere with your own Puppy USB operating system in your pocket!
- The main advantage of installing Puppy to USB is that you can have all your files and settings everywhere you are, without having to carry anything else with you! Another interesting fact is that the host OS on the PCs where you will use it will not be affected in any way. Nothing will be saved on them, preserving your privacy!

**THANK YOU FOR YOUR ATTENTION!**

**Alex Gotev**

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