

LINUX



Welcome to Linux! Tux the penguin will be your guide to Linux today. And now, let's step into the rabbit hole and explore a bit, shall we?

Linux is...

- Linux is an operating system
- It allows you to use your Computer's hardware and install software without being a cyber-ninja
- Linux is also very fast!!!



Linux

Registered User # 463686

What does Linux look like?

- Linux can look like almost anything!
- It is widely customizable and is very easily done so.
- The examples you will see use four different “window managers”.
- Window managers are what you see and what manages your windows and desktop.
- In Linux you can have anywhere from one to over two hundred desktops in the form of “virtual desktops”.

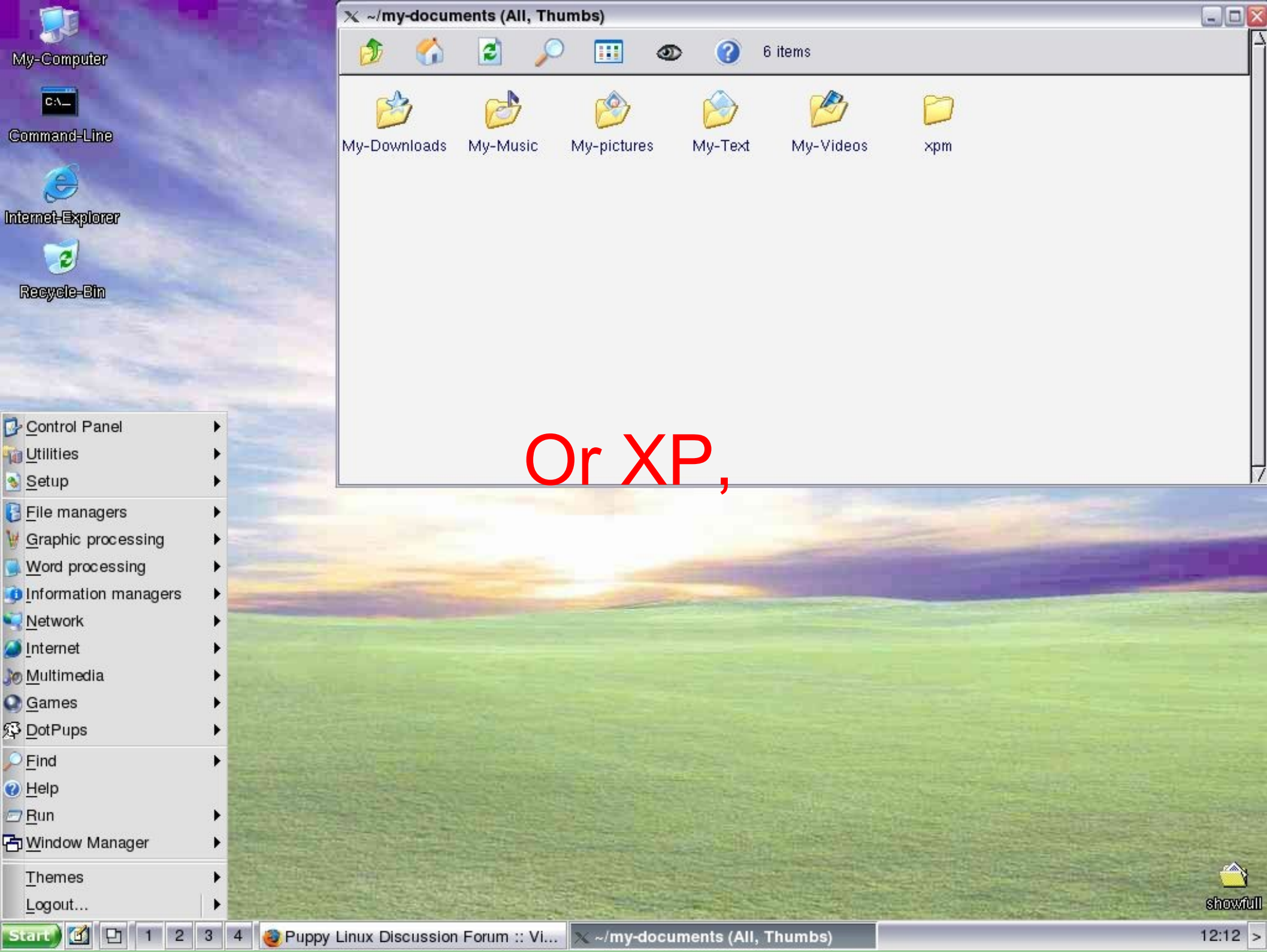
First some info!

- The most common window manager in use today is the Gnome desktop environment. But the one you will see most in the screenshots is called ICEWM. The very first desktop you will see is my personal one.
- The others are from other users from around the world.

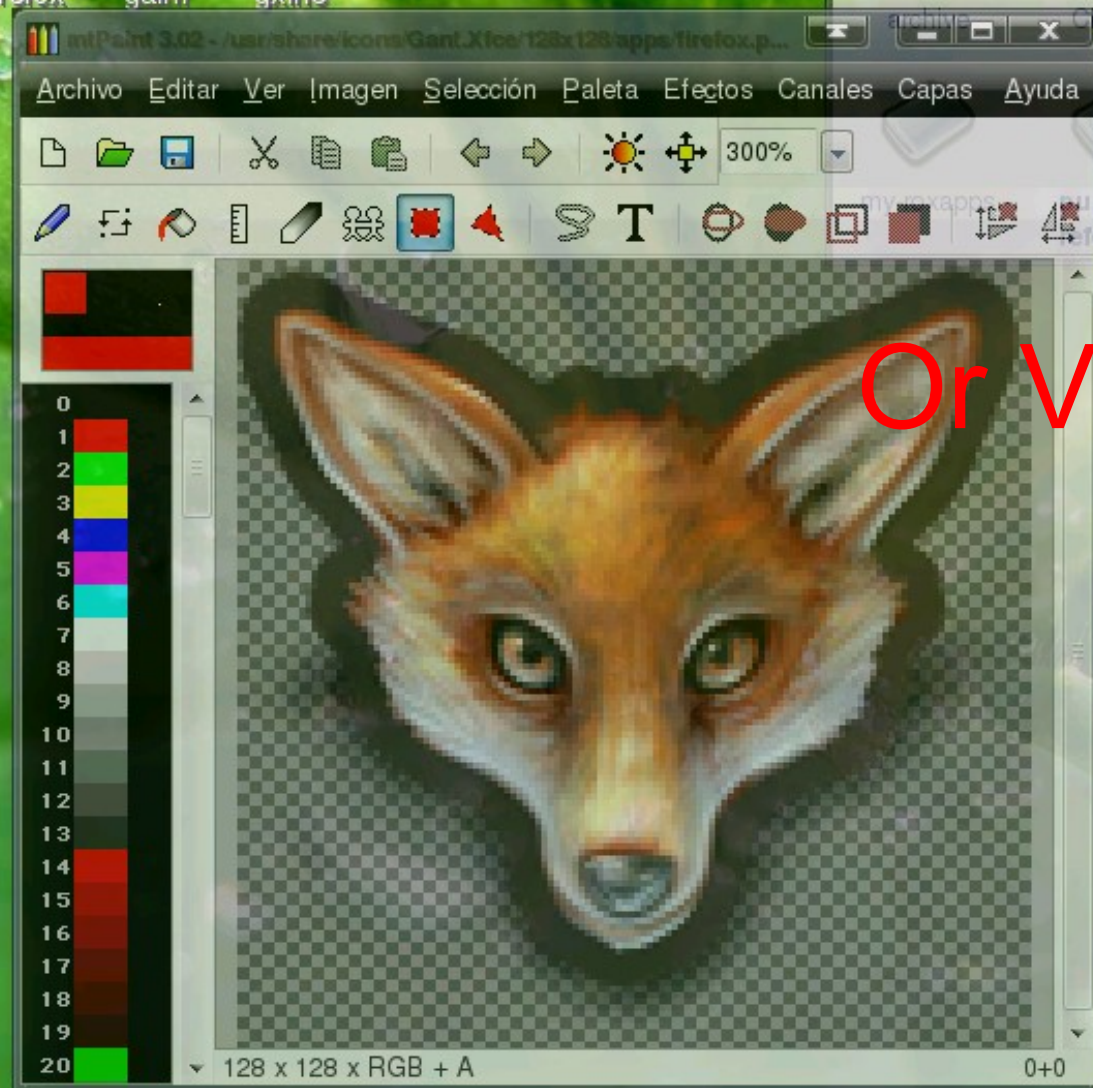


It can look like Mac!

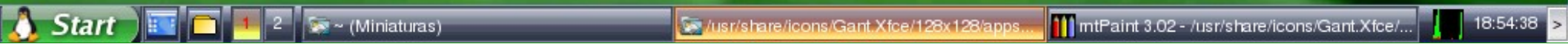
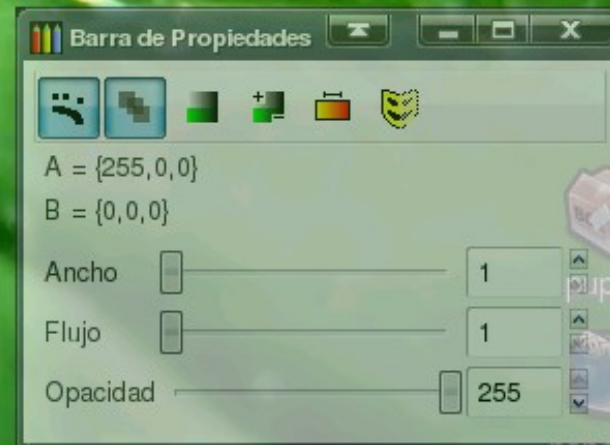




Or XP,



Or Vista,





Or something completely different!

```
shad:~/e_modules/screenshot
if (!ci->filename)
{
    t = time(NULL);
    localtime = localtime(&t);
    strftime(buff, sizeof(buff), "%Y-%m-%d-%H%M%S", localtime);
    sprintf(buff, sizeof(buff), "%s/%s.png", strdup(ci->location), strdup(
}
else
{
    if (ecore_file_is_dir(ci->location))
    {
        fl = ecore_file_ls(ci->location);
        ecore_list_goto_first(fl);
        while ((file = ecore_list_next(fl)) != NULL)
        {
            x = ecore_file_strip_ext(file);
            if (!x)
            {
                if (strstr(file, ci->filename))
                    c++;
            }
            else
            {
                if (strstr(x, ci->filename))
                    c++;
            }
        }
    }
}
```

+(Jed 0.99.16) Emacs: e_mod_main.c (C) 588/625 2:14pm

XChat: devilhorns @ FreeNode / #ninjapirate (+mttn)

3 ops, 17 total

- ChanServ
- devilhorns
- Hawkwind
- _harm
- boneyfrog
- cb3rob
- crashmatrix
- darkz

boneyfrog: ../fonts/ default.edc -o defaultmod.edj and restart e
Phoul: run that again right?
boneyfrog: werd
Phoul: k well it appears when i use the default mod theme
Phoul: i shall have to mess with that now
_harm: k
Phoul: :D
Phoul: I wanna see if i can pull off making a theme hehe

devilhorns

#e #ecommits #edevlop #etk #get-e #get-FAQed #ninjapirate #xsm



It can even have 3D desktops!



How does it work?

- It uses a base called the “terminal”. From the terminal you can run what is called “X”. once you have X started you can run anything. X is what runs the window manager and file explorer (like “my computer”)
- Linux usually only needs from 128-512mb of RAM to run very fast. And can run on computers as slow as 250mhz. It typically needs less than 700mb of hdd space Any portable device(Nintendo DS, PSP, ipod, gps system, etc.) can and does run Linux. You use Linux all the time, you just don't know it.

Connectivity?

- Recent updates to the Linux “kernel” make it compatible with all new hardware. It is capable of using many USB, SATA, wireless, and other devices.
- There are Twenty-nine million Linux users worldwide, not including large corporations and their servers and all the Linux phones and devices. This means that there is a lot of support for Linux. If you need help, go to the forum and ask!!

Versions and Options

- There are literally 350 REGISTERED versions of Linux in existence! The most popular (but not fastest) version is called Ubuntu.
- The version I use is called PuppyLinux. I find it to be much faster than most “distros” or versions.

Who makes Linux?

- Originally, Linux(or the kernel) was written in it's basic form by a man named Linus Torvalds, but he did not make all 300+ variants available today.
- Linux is usually started by one person or a small company and then maintained and added to by a community of enthusiasts.
www.puppylinux.org Is a good example of this.
- Some are built by large companies(systems like Ubuntu and it's derivatives, red hat, SUSE, and NOVELL plus others) but that still means that there are over 340 distros that are community built.

Price? What price?

- Most variants of Linux are available freely for download. But if you want a CD it will be about \$5, although Ubuntu developers will mail you CD's for free.
- Some versions are not free. Distros like LinuxXP, Red Hat, Novell and SUSE are between \$30-\$60 (for home use) server versions may run you up to \$200.
- To know more about what distro is right for you, you can check out www.distrowatch.com and look at some of the distros available.

Okay, I got it. Now what??

- Installation is usually quite simple. There will be an icon on the desktop to launch the installer(live discs) or it will give you an option to “run 'blah' installer” when you have booted the disk. It will usually be in a menu.
- Every distro uses a different installer and method
- We will be looking at the PuppyLinux one and comparing it to the PClinuxOS 2007 and the installer packaged with it. All screen shots supplied by me.

First...

- Okay, so to install them, the first step is the same. You will need to put the ISO image onto a cd and then put the cd into the drive of the computer you will be installing it onto. Then start the computer.
- With PCLinuxOS(PCLOS) you will see a menu pop up. Just press enter.
- PuppyLinux – just wait a second or two.
- After that, you will need to follow the on-screen instructions to set up your keyboard and mouse and network and such. (for puppy you will also need to set up the video)

Now...

- From here on in there will only be screenshots. First will be the PuppyLinux ones, and then the PCLOS ones.



- file
- help
- mount
- install
- setup
- edit
- console
- write
- html
- calc
- paint
- draw
- browse
- email
- chat

- lock
- zip
- trash

Desktop

System

Setup

- Puppy package manager
- Wizard Wizard
- ALSA sound Wizard
- CD/DVD drive Wizard
- CUPS Printer Wizard
- Linux-Firewall Wizard
- Mouse/keyboard Wizard
- Network Wizard
- Xorg Video Wizard
- Xvesa Video Wizard
- Puppy universal installer
- Remaster Puppy live-CD
- WakePup create boot floppy

Utility

Filesystem

Graphic

Document

Calculate

Personal

Network

Internet

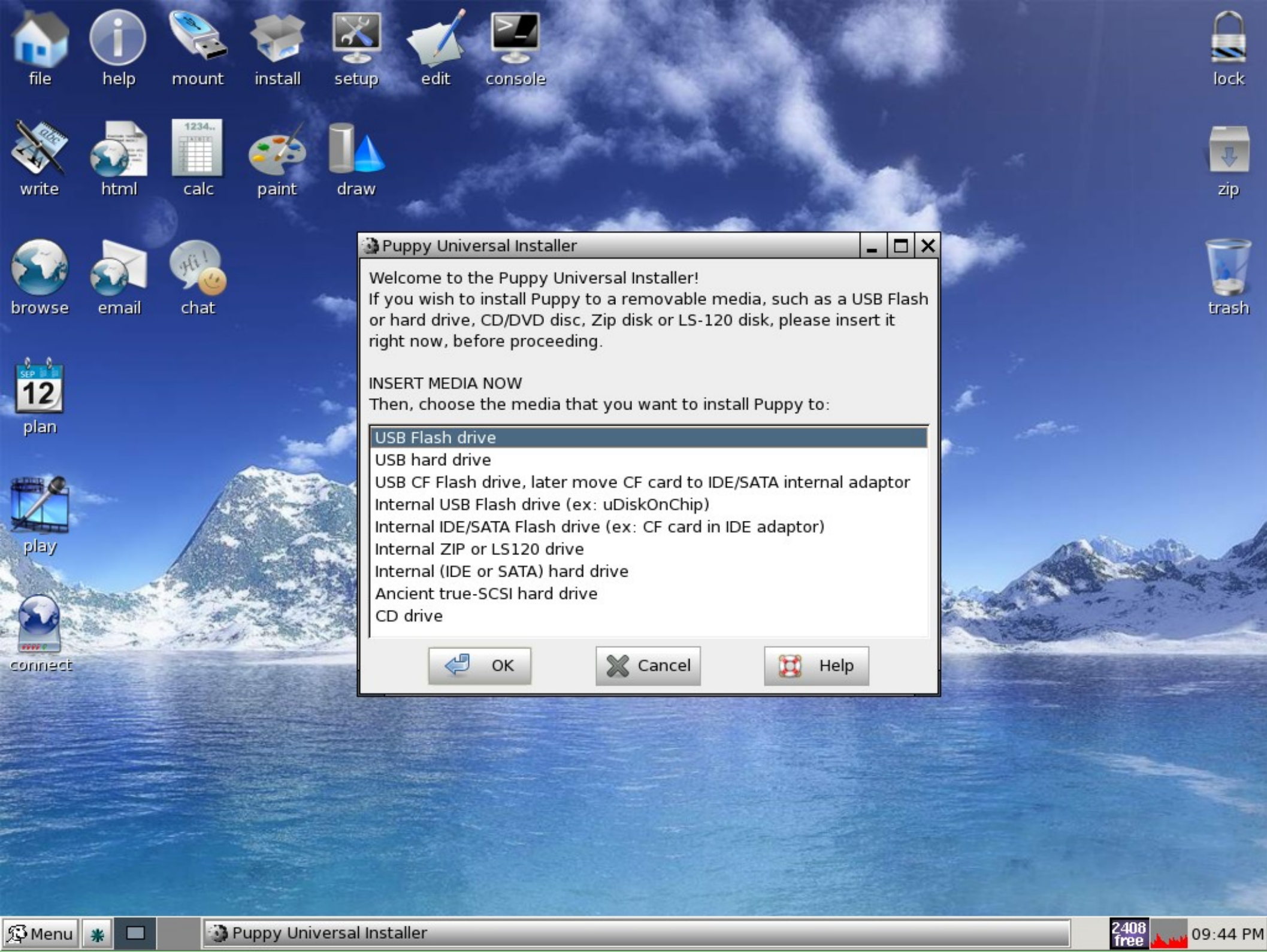
Multimedia

Fun

Help

Shutdown

Menu



Puppy Universal Installer

Welcome to the Puppy Universal Installer!
If you wish to install Puppy to a removable media, such as a USB Flash or hard drive, CD/DVD disc, Zip disk or LS-120 disk, please insert it right now, before proceeding.

INSERT MEDIA NOW
Then, choose the media that you want to install Puppy to:

USB Flash drive

USB hard drive

USB CF Flash drive, later move CF card to IDE/SATA internal adaptor

Internal USB Flash drive (ex: uDiskOnChip)

Internal IDE/SATA Flash drive (ex: CF card in IDE adaptor)

Internal ZIP or LS120 drive

Internal (IDE or SATA) hard drive

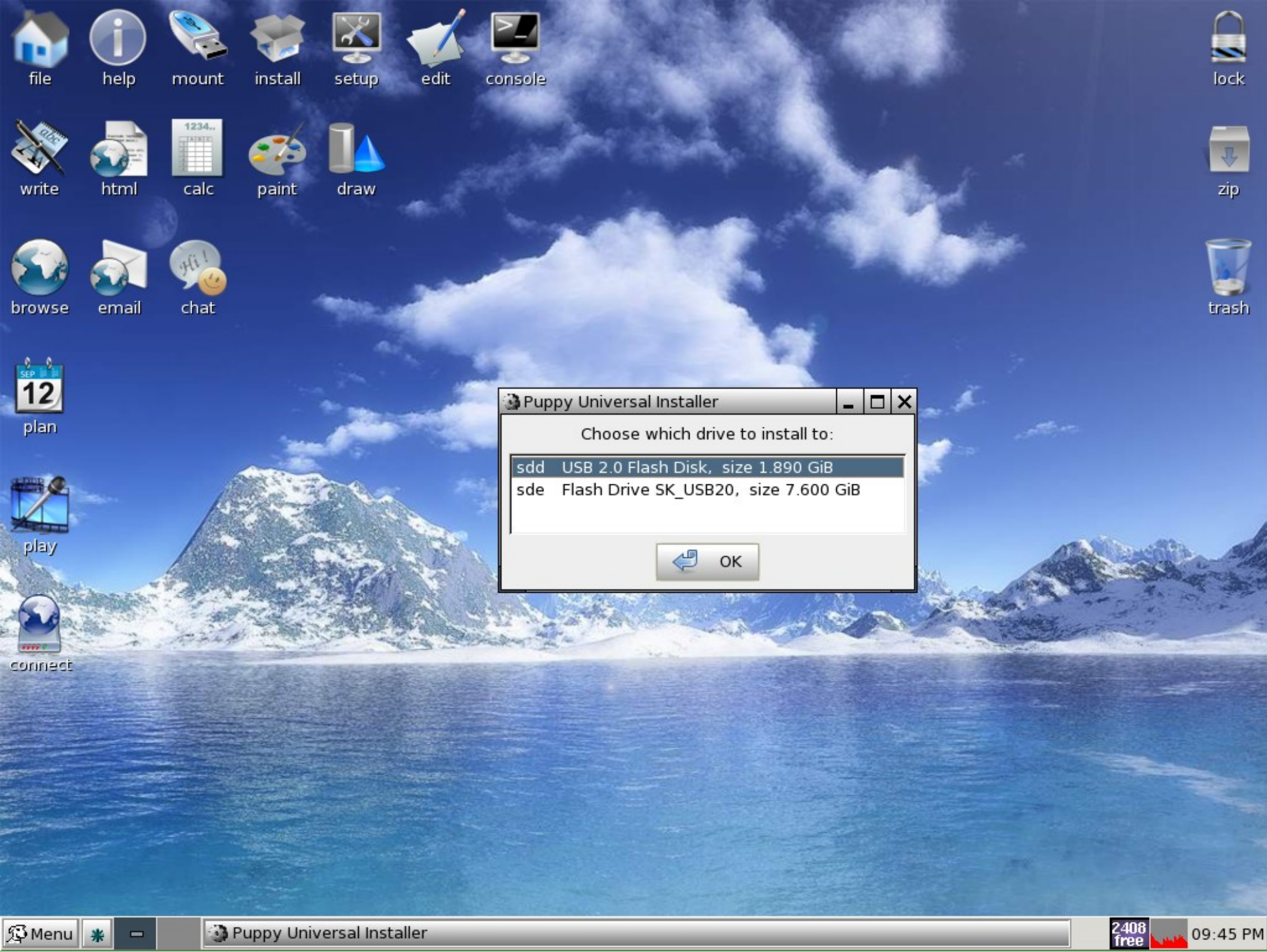
Ancient true-SCSI hard drive

CD drive

OK

Cancel

Help




file


help


mount


install


setup


edit


console


write



html


calc



paint



draw



browse


email


chat


lock


zip


trash


SEP
12
plan


play


connect

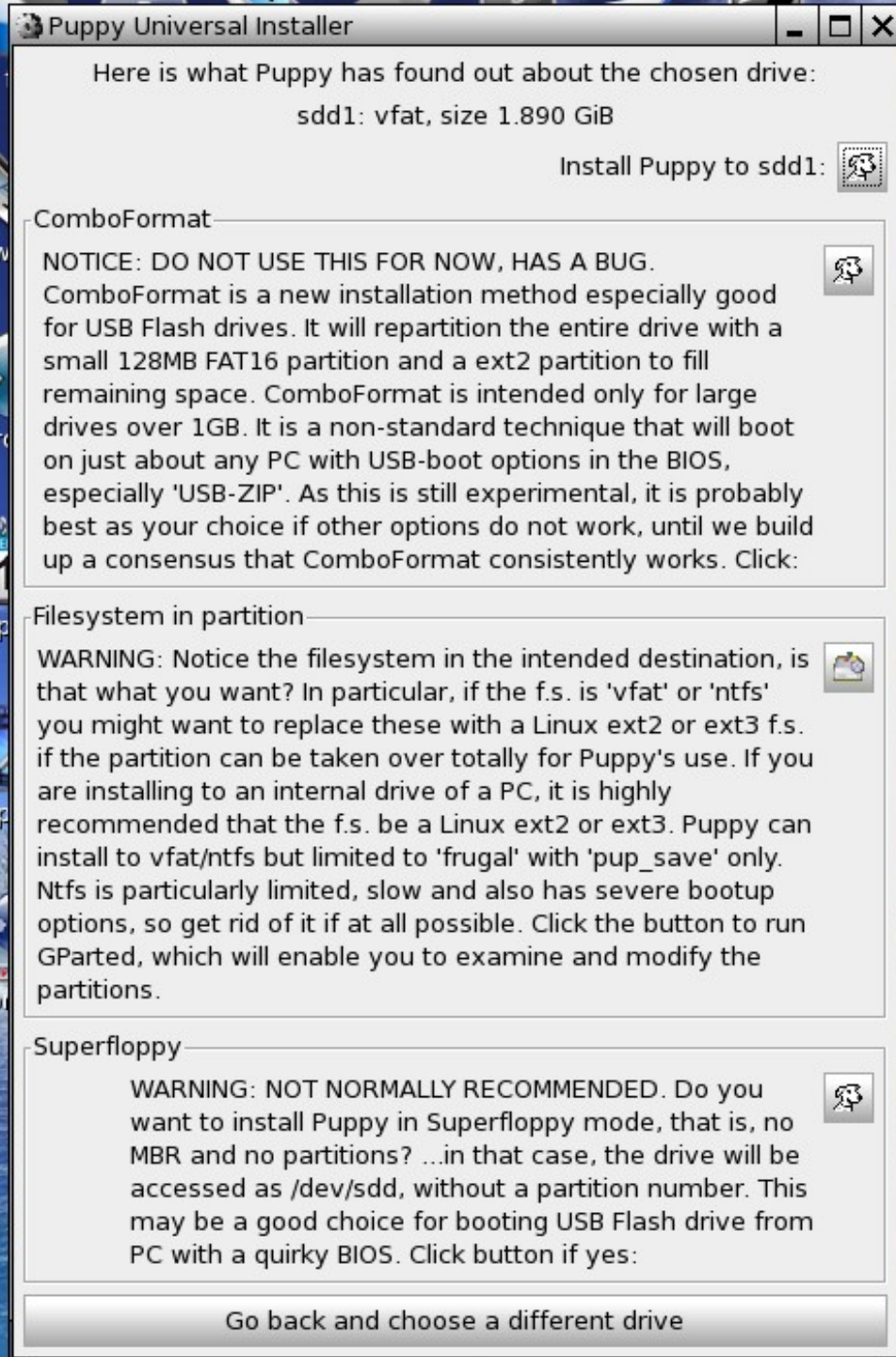
Puppy Universal Installer

Choose which drive to install to:

sdd USB 2.0 Flash Disk, size 1.890 GiB


sde Flash Drive SK_USB20, size 7.600 GiB

 OK



Here is what Puppy has found out about the chosen drive:

sdd1: vfat, size 1.890 GiB


Install Puppy to sdd1: 

ComboFormat


NOTICE: DO NOT USE THIS FOR NOW, HAS A BUG. 

ComboFormat is a new installation method especially good for USB Flash drives. It will repartition the entire drive with a small 128MB FAT16 partition and a ext2 partition to fill remaining space. ComboFormat is intended only for large drives over 1GB. It is a non-standard technique that will boot on just about any PC with USB-boot options in the BIOS, especially 'USB-ZIP'. As this is still experimental, it is probably best as your choice if other options do not work, until we build up a consensus that ComboFormat consistently works. Click:

Filesystem in partition

WARNING: Notice the filesystem in the intended destination, is that what you want? In particular, if the f.s. is 'vfat' or 'ntfs' you might want to replace these with a Linux ext2 or ext3 f.s. if the partition can be taken over totally for Puppy's use. If you are installing to an internal drive of a PC, it is highly recommended that the f.s. be a Linux ext2 or ext3. Puppy can install to vfat/ntfs but limited to 'frugal' with 'pup_save' only. Ntfs is particularly limited, slow and also has severe bootup options, so get rid of it if at all possible. Click the button to run GParted, which will enable you to examine and modify the partitions. 

Superfloppy

WARNING: NOT NORMALLY RECOMMENDED. Do you want to install Puppy in Superfloppy mode, that is, no MBR and no partitions? ...in that case, the drive will be accessed as /dev/sdd, without a partition number. This may be a good choice for booting USB Flash drive from PC with a quirky BIOS. Click button if yes: 

Go back and choose a different drive



lock



zip



trash



file



help



mount



install



setup



edit



console



lock



write



html



calc



paint



draw



zip



trash



browse



email



chat



plan



play

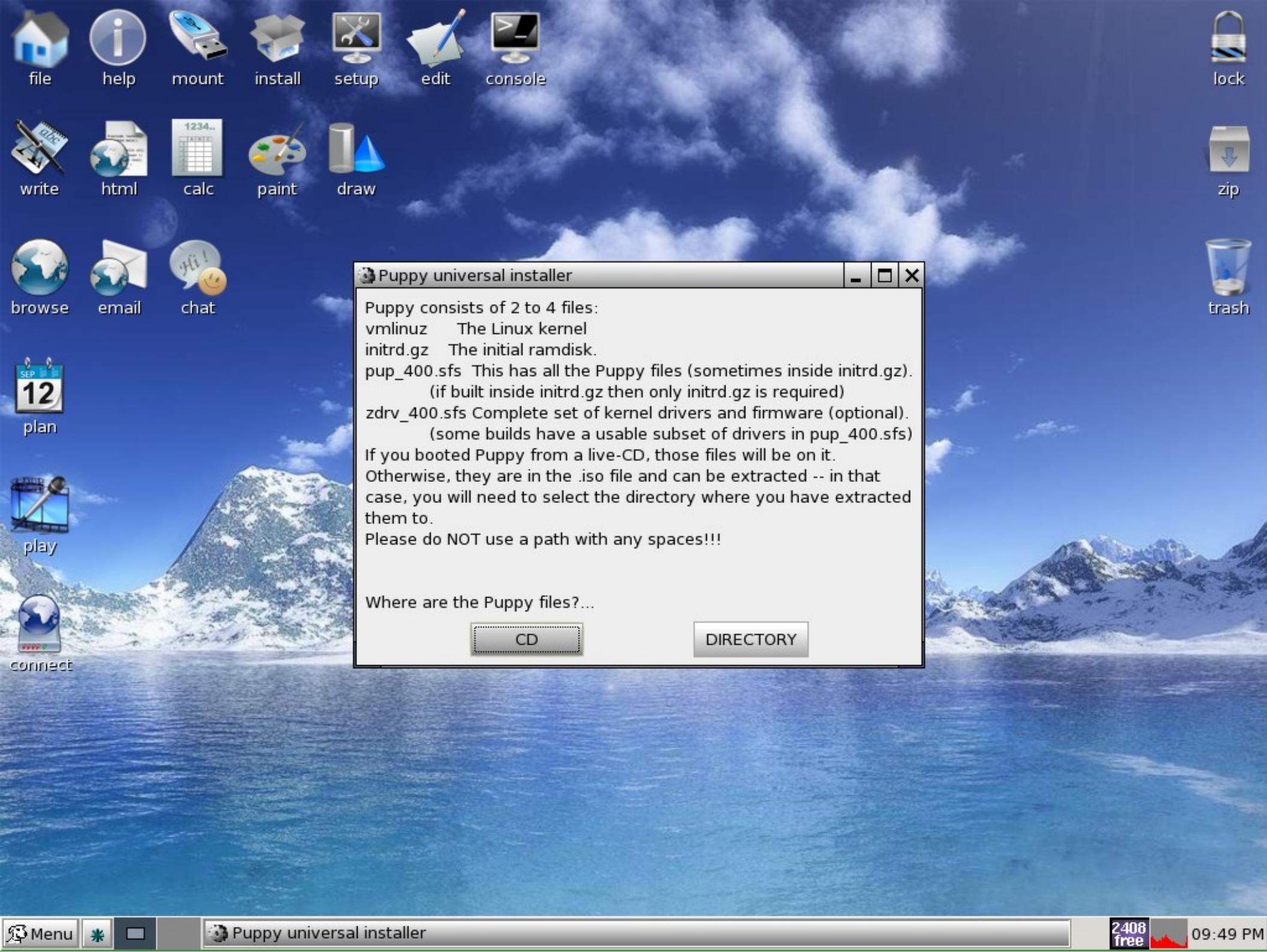


connect

Puppy Universal Installer

You have chosen to install Puppy to partition /dev/sdd1, which has a vfat filesystem and the size is 1890M.

Press OK button to install Puppy (note, there will be one or two more dialog windows before you have to commit to the actual install)...



file



help



mount



install



setup



edit



console



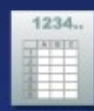
lock



write



html



calc



paint



draw



zip



browse



email



chat



trash



plan



play



connect

Puppy universal installer

Puppy consists of 2 to 4 files:
vmlinuz The Linux kernel
initrd.gz The initial ramdisk.
pup_400.sfs This has all the Puppy files (sometimes inside initrd.gz).
(if built inside initrd.gz then only initrd.gz is required)
zdrv_400.sfs Complete set of kernel drivers and firmware (optional).
(some builds have a usable subset of drivers in pup_400.sfs)
If you booted Puppy from a live-CD, those files will be on it.
Otherwise, they are in the .iso file and can be extracted -- in that
case, you will need to select the directory where you have extracted
them to.
Please do NOT use a path with any spaces!!!

Where are the Puppy files?...

CD DIRECTORY



file



help



mount



install



setup



edit



console



lock



write



html



calc



paint



draw



zip



browse



email



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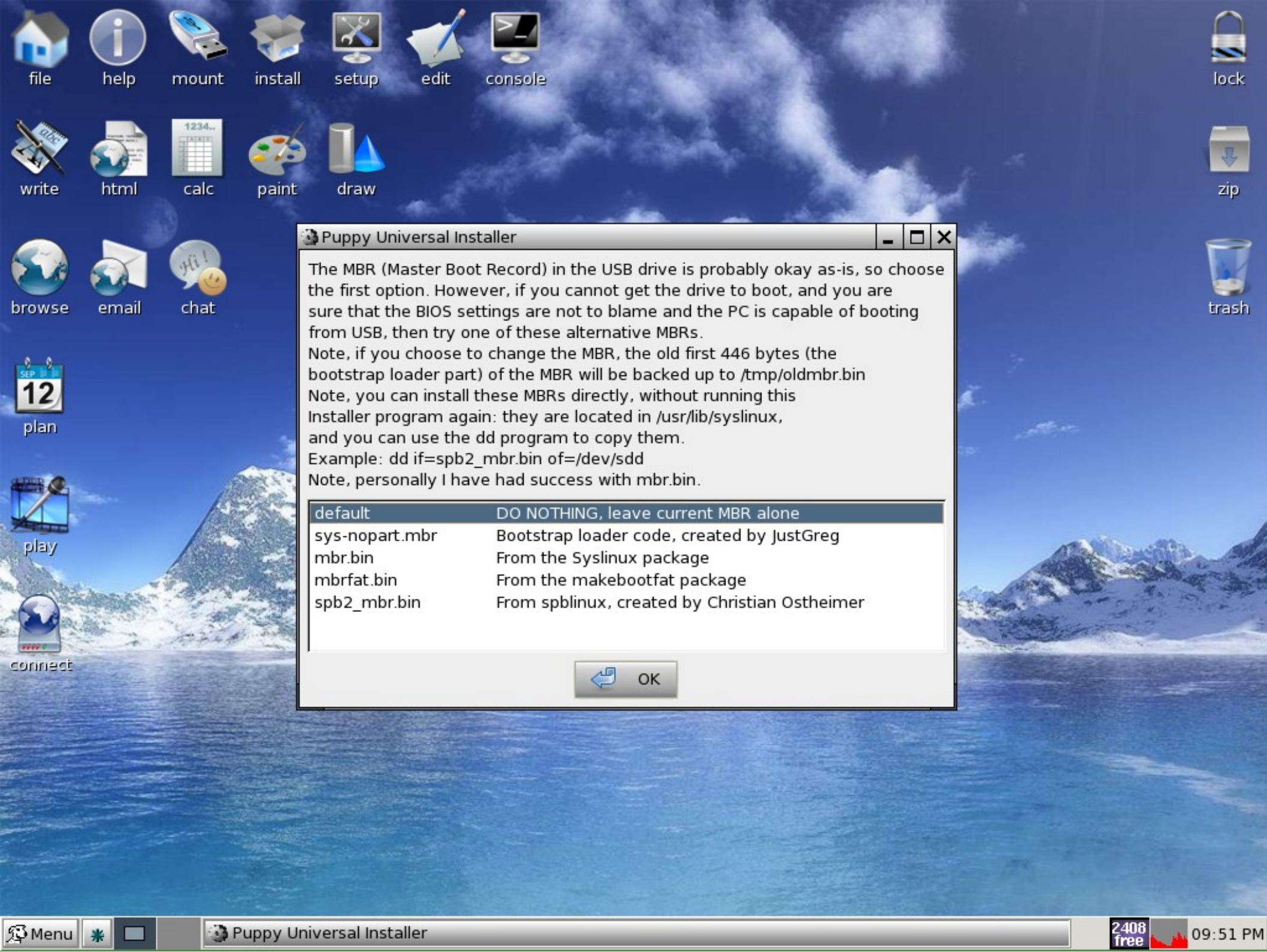
connect

Puppy universal installer

Please insert the Puppy live-CD (if not already) into the drive.
Note, in case your PC has two CD/DVD drives, Puppy is expecting
the live-CD to be inserted into sr0, which is described as:
HL-DT-STDVDRAM GSA-H10A

After inserting live-CD, click OK button...

 OK



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trash

Puppy Universal Installer

The MBR (Master Boot Record) in the USB drive is probably okay as-is, so choose the first option. However, if you cannot get the drive to boot, and you are sure that the BIOS settings are not to blame and the PC is capable of booting from USB, then try one of these alternative MBRs.

Note, if you choose to change the MBR, the old first 446 bytes (the bootstrap loader part) of the MBR will be backed up to /tmp/oldmbr.bin

Note, you can install these MBRs directly, without running this Installer program again: they are located in /usr/lib/syslinux, and you can use the dd program to copy them.

Example: dd if=spb2_mbr.bin of=/dev/sdd

Note, personally I have had success with mbr.bin.

default	DO NOTHING, leave current MBR alone
sys-nopart.mbr	Bootstrap loader code, created by JustGreg
mbr.bin	From the Syslinux package
mbrfat.bin	From the makebootfat package
spb2_mbr.bin	From spblinux, created by Christian Ostheimer

OK

Menu

Puppy Universal Installer

2408 free

09:51 PM




file


help


mount


install


setup


edit


console


write


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 Puppy Universal Installer

Please just accept the default here, 'JUST KEEP GOING'.
PLEASE MAKE SURE TOP ENTRY HIGHLIGHTED THEN CLICK OK BUTTON

However, if you have tried this Puppy Universal Installer
but Puppy will not boot, you can try one of the other choices here.

Personally, I have had success with using GParted to wipe and
recreate the partition...

default	JUST KEEP GOING
GParted	Wipe and recreate USB/IDE-CF partition using GParted
syslinux	Make USB or IDE-CF msdos/vfat partition bootable

 OK



file



help



mount



install



setup



edit



console



lock



zip



trash



write



browse



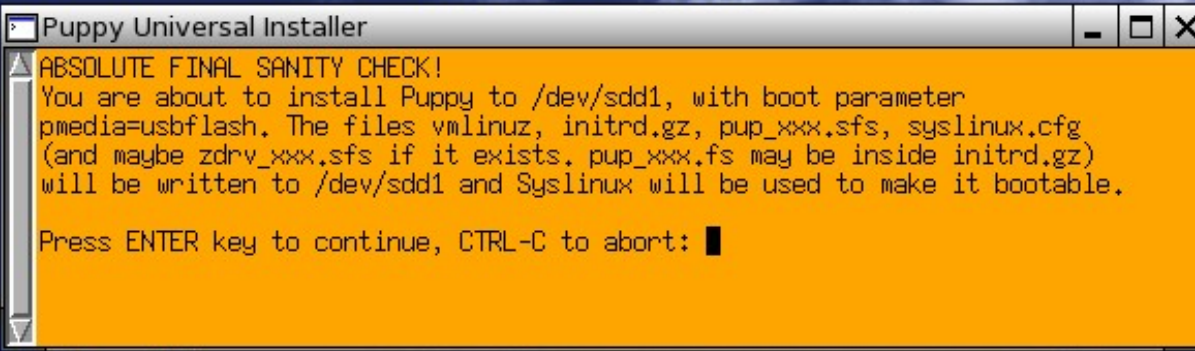
plan



play



connect



email

chat



Puppy Universal Installer

2408
free



09:53 PM



file



help



mount



install



setup



edit



console



lock



zip



trash



write



browse



plan



play



connect

Puppy Universal Installer

```
Do you want to wipe all files in /dev/sdd1? 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 pup_save though!).

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

email

chat

Menu



Puppy Universal Installer

2408
free

09:54 PM



file



help



mount



install



setup



edit



console



lock



write



browse



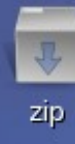
plan



play



connect



zip



trash

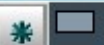
```
Puppy Universal Installer
normally answer no if upgrading Puppy, or yes for a fresh install and
you want to get rid of old files that are just taking up space.
Note, you can also manually prune files in /mnt/data then choose no here.
Note, if you choose no here, this script will still do some basic deleting
of any files of an earlier Puppy installation (not the pup_save though!).

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

Deleting everything in /mnt/data...

Making sdd1 bootable...

Copying vmlinuz...
Creating syslinux.cfg...
Would you like syslinux.cfg to have prefix=noram boot parameter?
this will prevent pup_xxx.sfs file from being copied into RAM, which speeds
bootup and frees up RAM space, but slows down application startup slightly.
Probably good to answer yes here if PC has 256MB and no swap file/partition
in an internal hard drive. But, you can always edit syslinux.cfg later if
you want to try with or without loading to RAM.
NOTE: you can answer no here if the PC has less than 256MB RAM, as Puppy
will automatically see insufficient RAM and not copy the .sfs file to RAM.
ENTER key only for no, else any char then ENTER for yes: █
```



Puppy Universal Installer

2408
free

09:56 PM



file



help



mount



install



setup



edit



console



lock



write



browse



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play



connect



zip



trash

Puppy Universal Installer

of any files of an earlier Puppy installation (not the pup_save though!).

No, press ENTER only to not wipe all files, or

Yes, press any alpha or numeric char then ENTER to wipe all files: a

Deleting everything in /mnt/data...

Making sdd1 bootable...

Copying vmlinuz...

Creating syslinux.cfg...

Would you like syslinux.cfg to have pfix=noram boot parameter?

this will prevent pup_XXX.sfs file from being copyied into RAM, which speeds bootup and frees up RAM space, but slows down application startup slightly. Probably good to answer yes here if PC has 256MB and no swap file/partition in an internal hard drive. But, you can always edit syslinux.cfg later if you want to try with or without loading to RAM.

NOTE: you can answer no here if the PC has less than 256MB RAM, as Puppy will automatically see insufficient RAM and not copy the .sfs file to RAM.

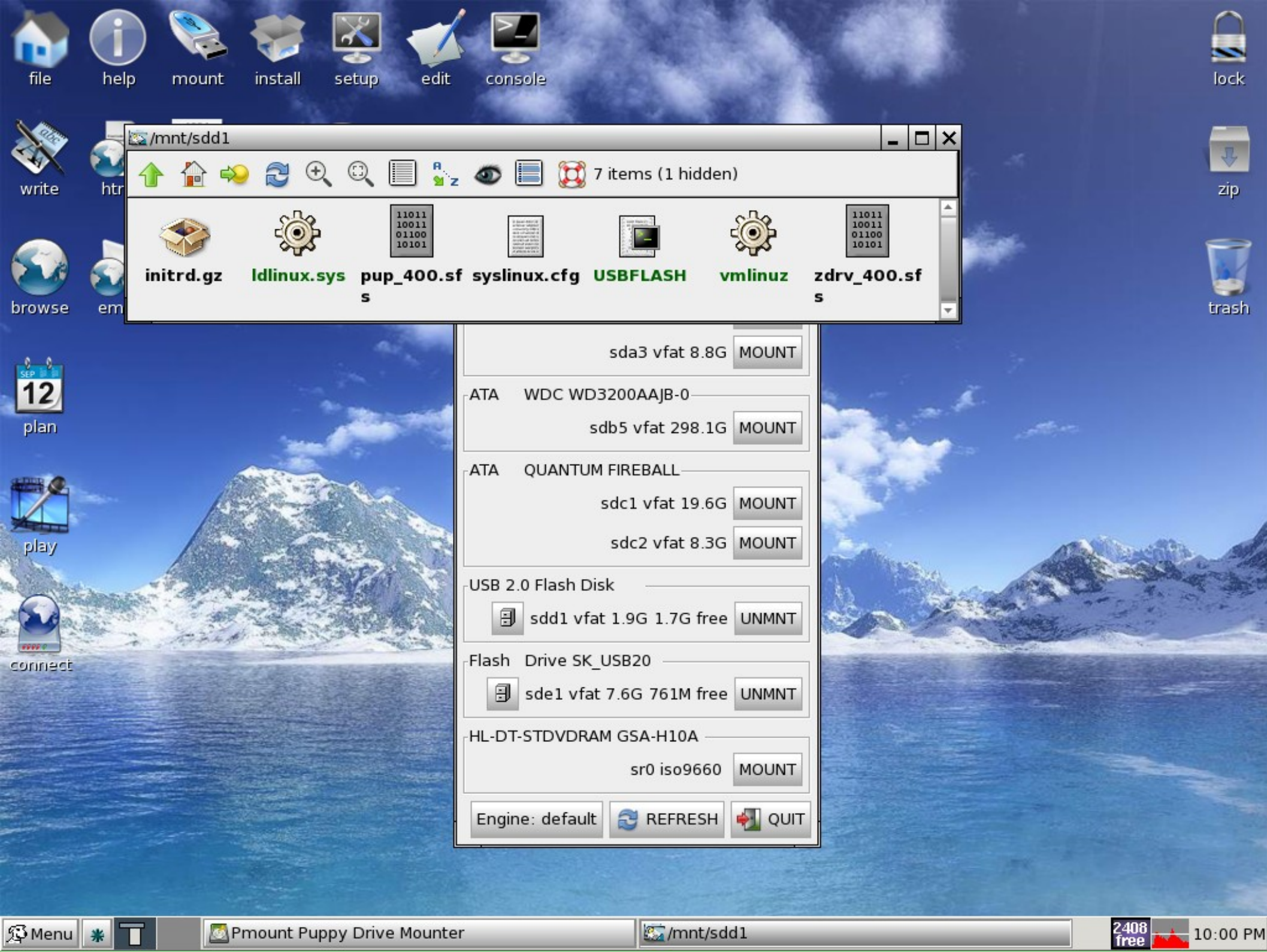
ENTER key only for no, else any char then ENTER for yes: a

Creating marker file for wakeup boot floppy...

Copying initrd.gz...

Copying .sfs files...

Finished, press ENTER key to continue: █



file help mount install setup edit console

lock

write htr browse em

SEP 12 plan

play

connect

zip trash

/mnt/sdd1

7 items (1 hidden)

initrd.gz ldlinux.sys pup_400.sf syslinux.cfg USBFLASH vmlinuz zdrv_400.sf

sda3 vfat 8.8G MOUNT

ATA WDC WD3200AAJB-0

sdb5 vfat 298.1G MOUNT

ATA QUANTUM FIREBALL

sdcl vfat 19.6G MOUNT

sdc2 vfat 8.3G MOUNT

USB 2.0 Flash Disk

sdd1 vfat 1.9G 1.7G free UNMNT

Flash Drive SK_USB20

sde1 vfat 7.6G 761M free UNMNT

HL-DT-STDVDRAM GSA-H10A

sr0 iso9660 MOUNT

Engine: default REFRESH QUIT



Home



Installation
Help



Install
PCLinuxOS



Konsole



My
Computer



Trash



10:11

09/05/08



Home



Installation
Help



Install
PCLinuxOS



Konsole



My
Computer



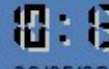
Trash



GEEKME
NU



1	2
3	4



09/05/08



Home



Installation
Help



Install
PCLinuxOS



Konsole



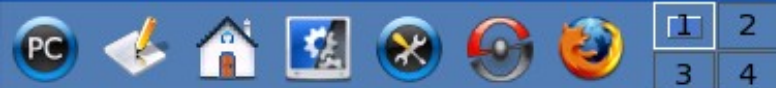
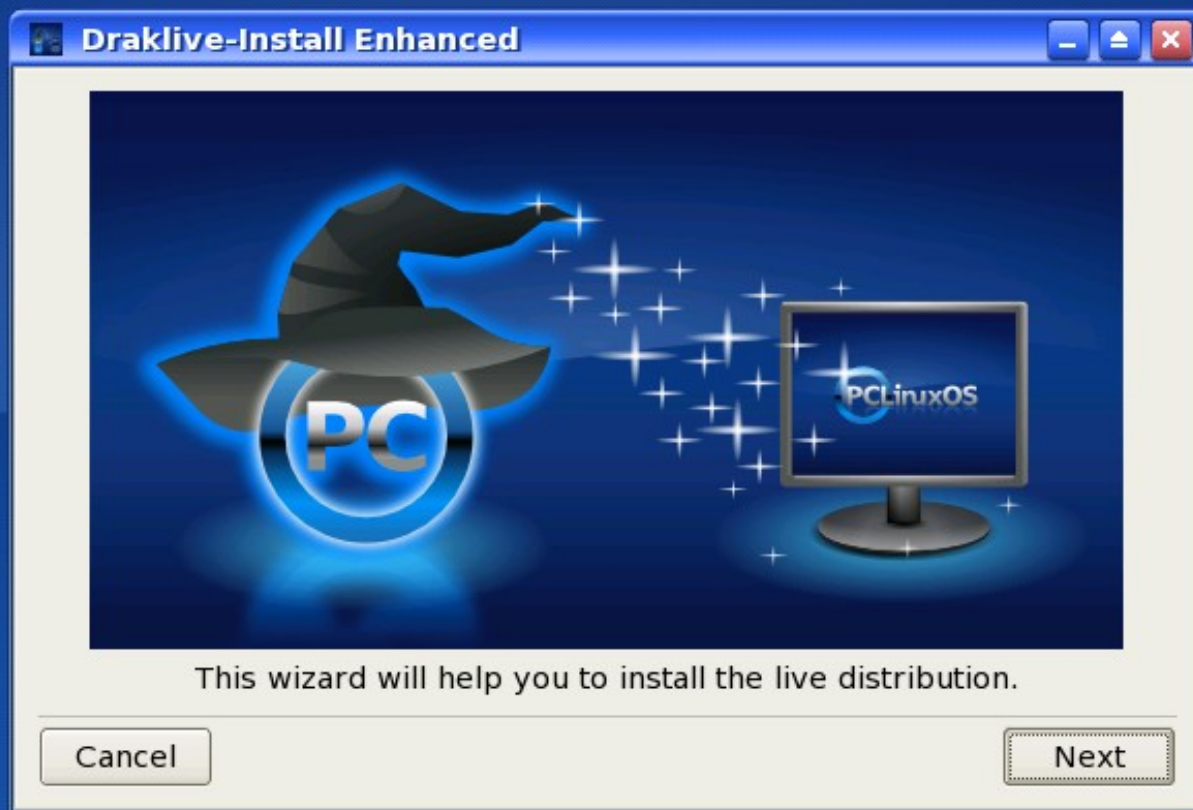
My
Computer



Trash



GEEKME
NU



Draklive-Install Enha



10:14

09/05/08



Home



Installation
Help



Install
PCLinuxOS



Konsole



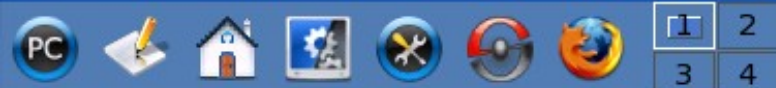
My
Computer



Trash



GEEKME
NU



Draklive-Install Enha



10:15

09/05/08



Home



Installation
Help



Install
PCLinuxOS



Konsole



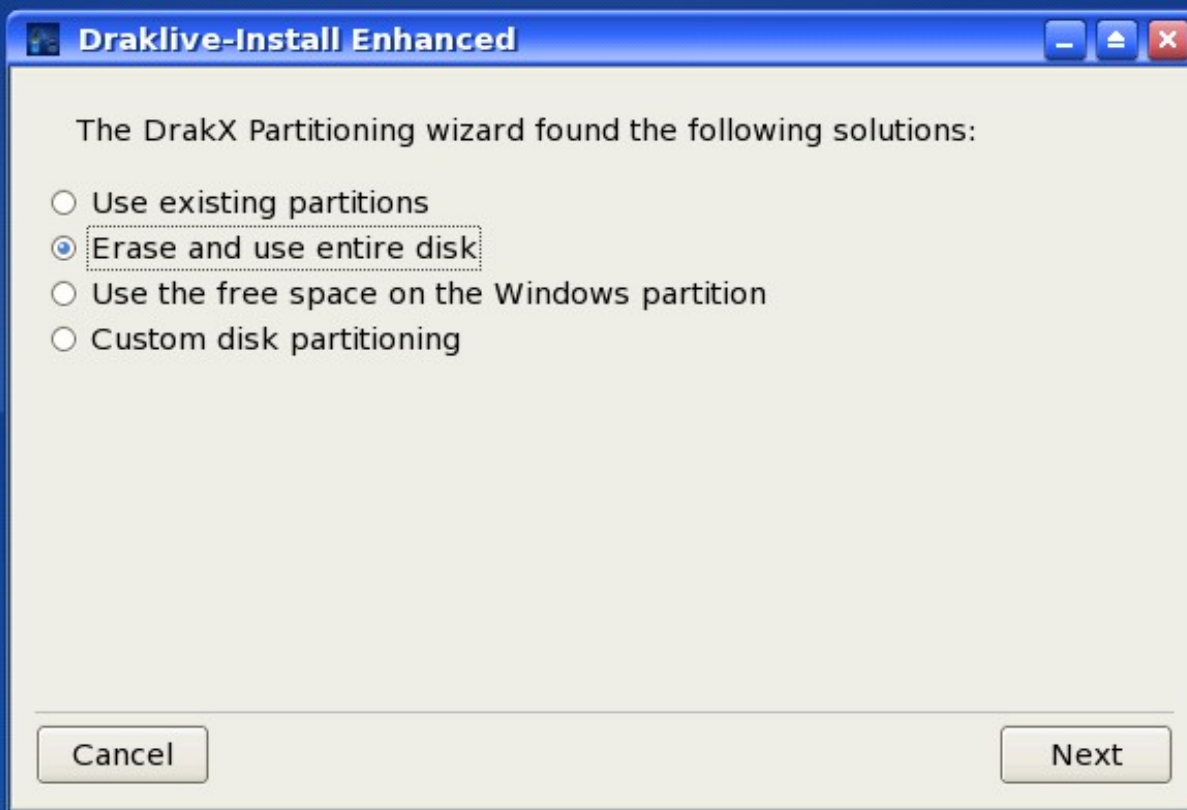
My
Computer



Trash



GEEKME
NU



Draklive-Install Enha



10:16

09/05/08



Home



Installation
Help



Install
PCLinuxOS



Konsole



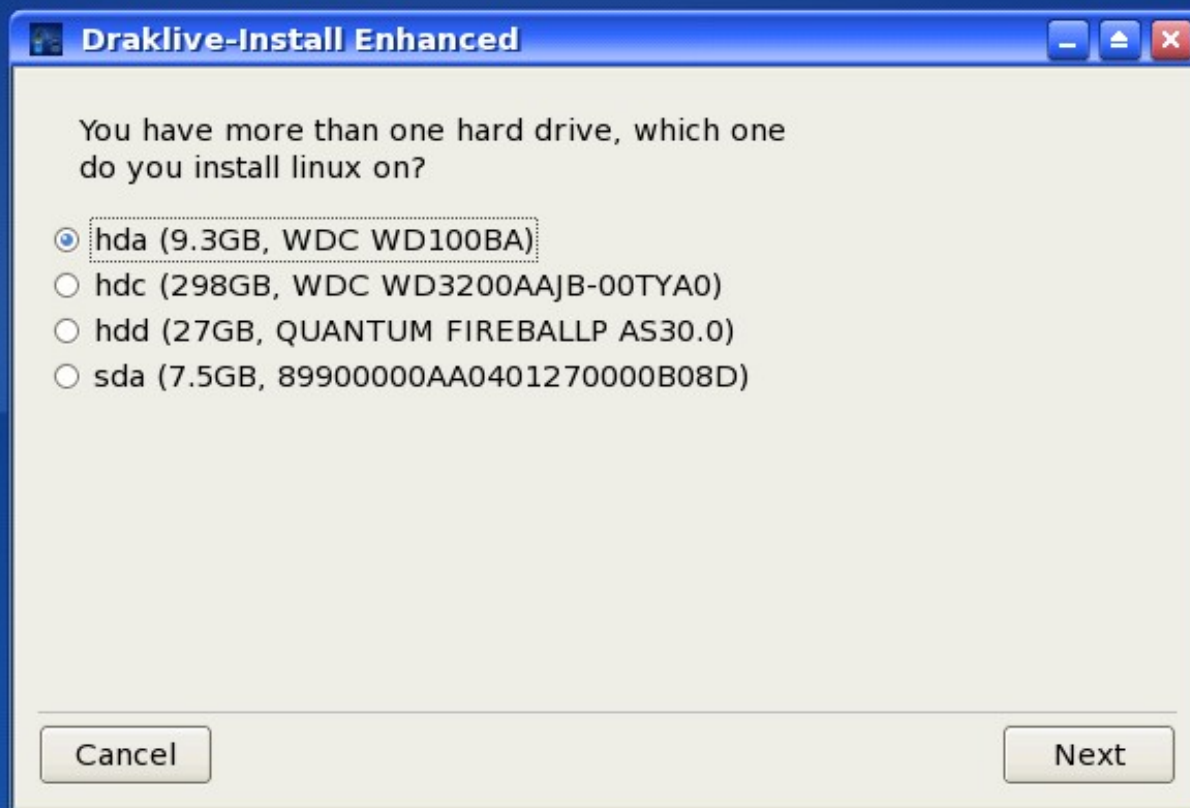
My
Computer



Trash



GEEKME
NU



Draklive-Install Enha



10:16

09/05/08



Home



Installation
Help



Install
PCLinuxOS



Konsole



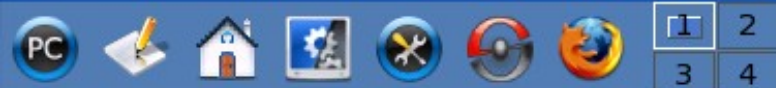
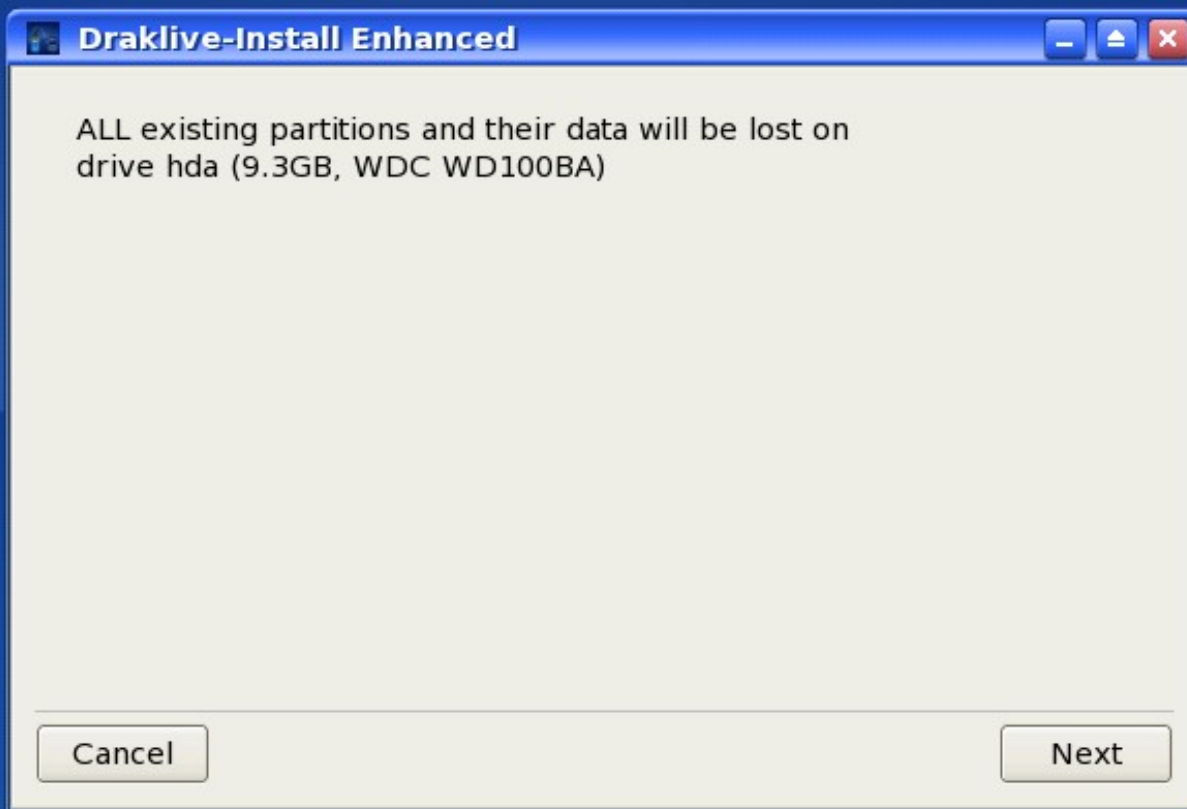
My
Computer



Trash



GEEKME
NU



Draklive-Install Enha



10:17

09/05/08



Home



Installation
Help



Install
PCLinuxOS



Konsole



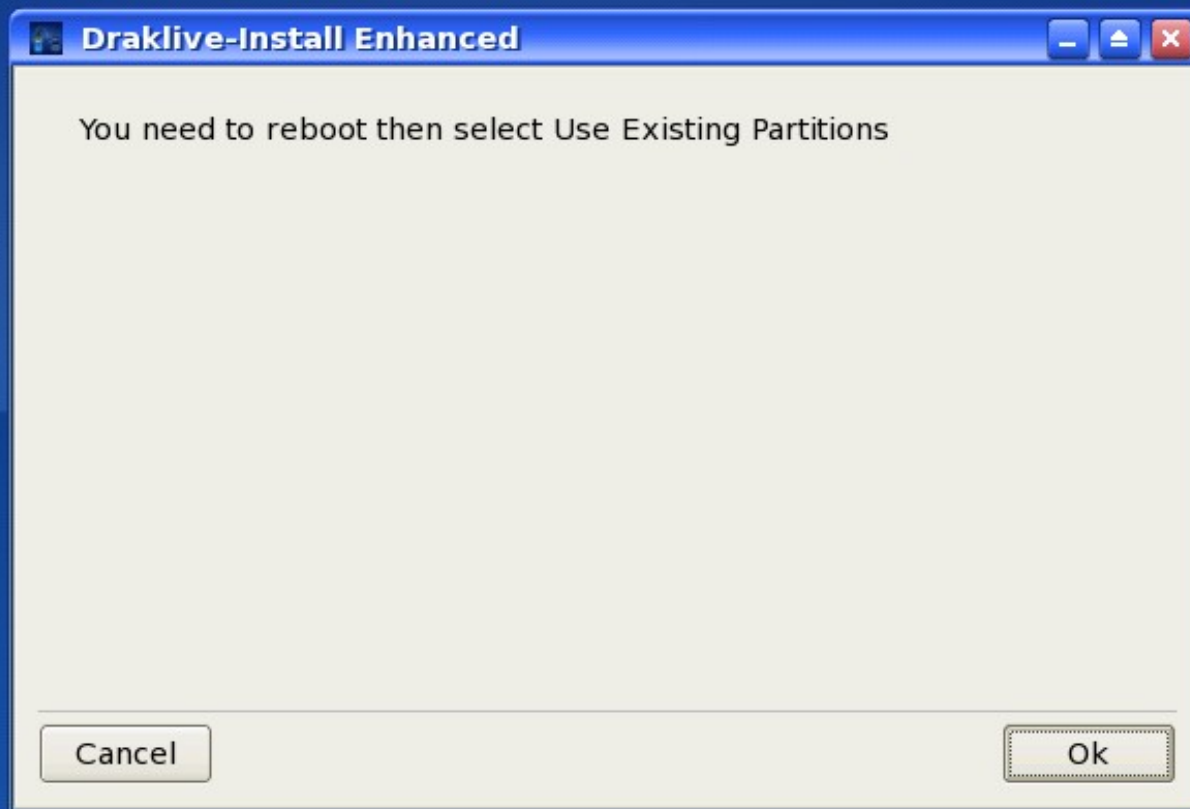
My
Computer



Trash



GEEKME
NU



Draklive-Install Enha



09/05/08



Home



Installation
Help



Install
PCLinuxOS



Konsole

Most Used Applications

KSnapshot

All Applications

More Applications ▶

Internet ▶

Multimedia ▶

Office ▶

System ▶

Actions

Find ▶

Recent Documents ▶

System Menu ▶

Run Command...

Switch User ▶

Lock Session

Log Out...



1

2

3

4



10:19

09/05/08



Home



Installation
Help



Install
PCLinuxOS



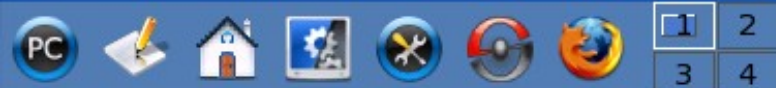
Konsole



My
Computer



Trash



Draklive-Install Enha



10:27

09/05/08



Home



Installation
Help



Install
PCLinuxOS



Konsole



My
Computer



Trash



GEEKME
NU



Draklive-Install Enhanced



Choose the partitions you want to format

☒ hda1 (5.1GB, /, ext3)

Cancel

Advanced

Next



2

3

4

Draklive-Install Enha



09:31

09/05/08



Home



Installation
Help



Install
PCLinuxOS



Konsole



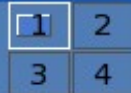
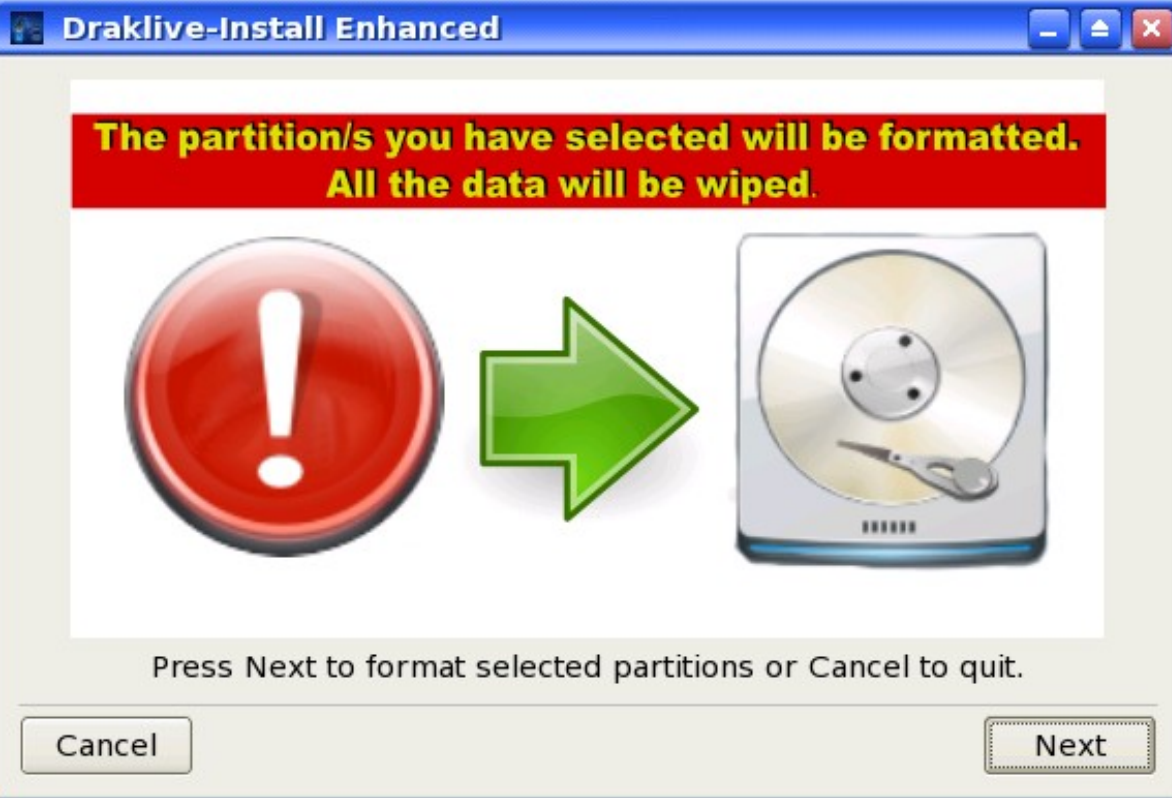
My
Computer



Trash



GEEKME
NU



Draklive-Install Enha



10:32

09/05/08



Home



Installation
Help



Install
PCLinuxOS



Konsole



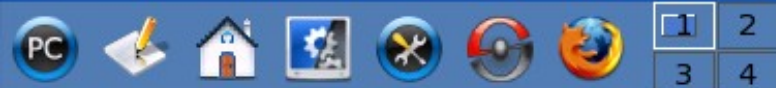
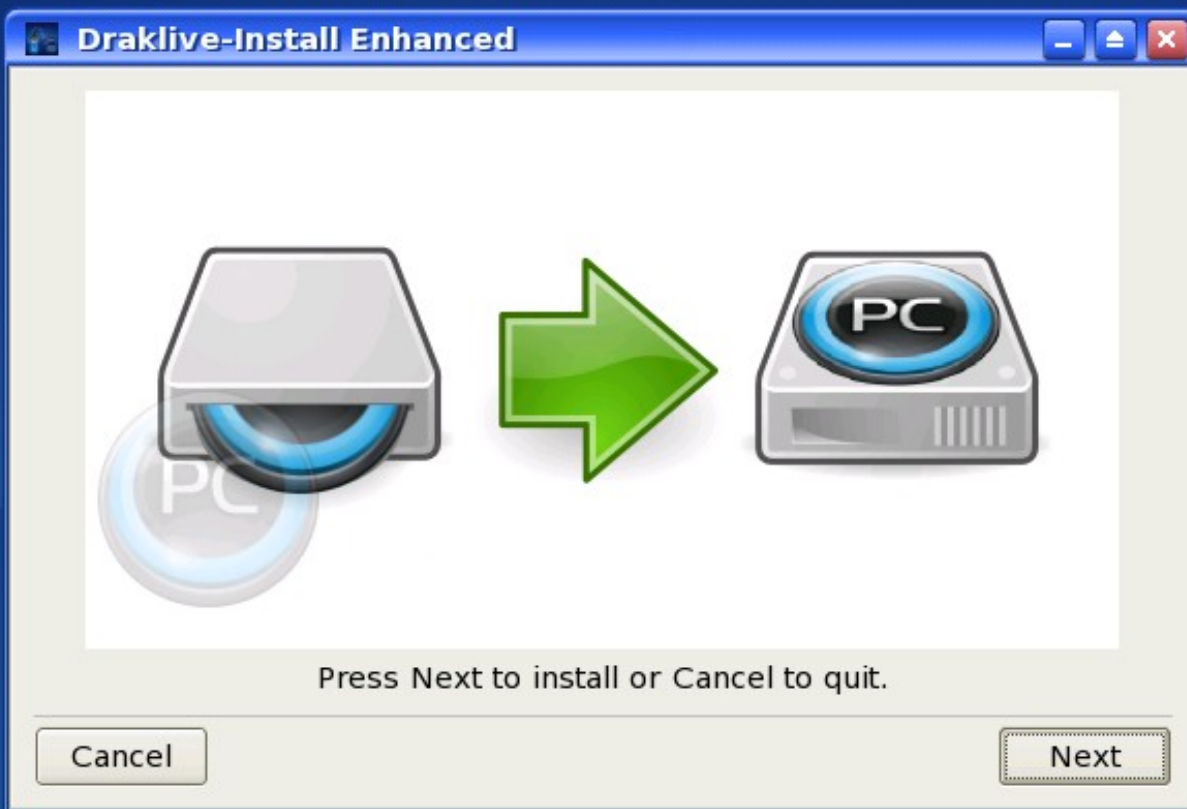
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Installation
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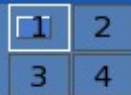
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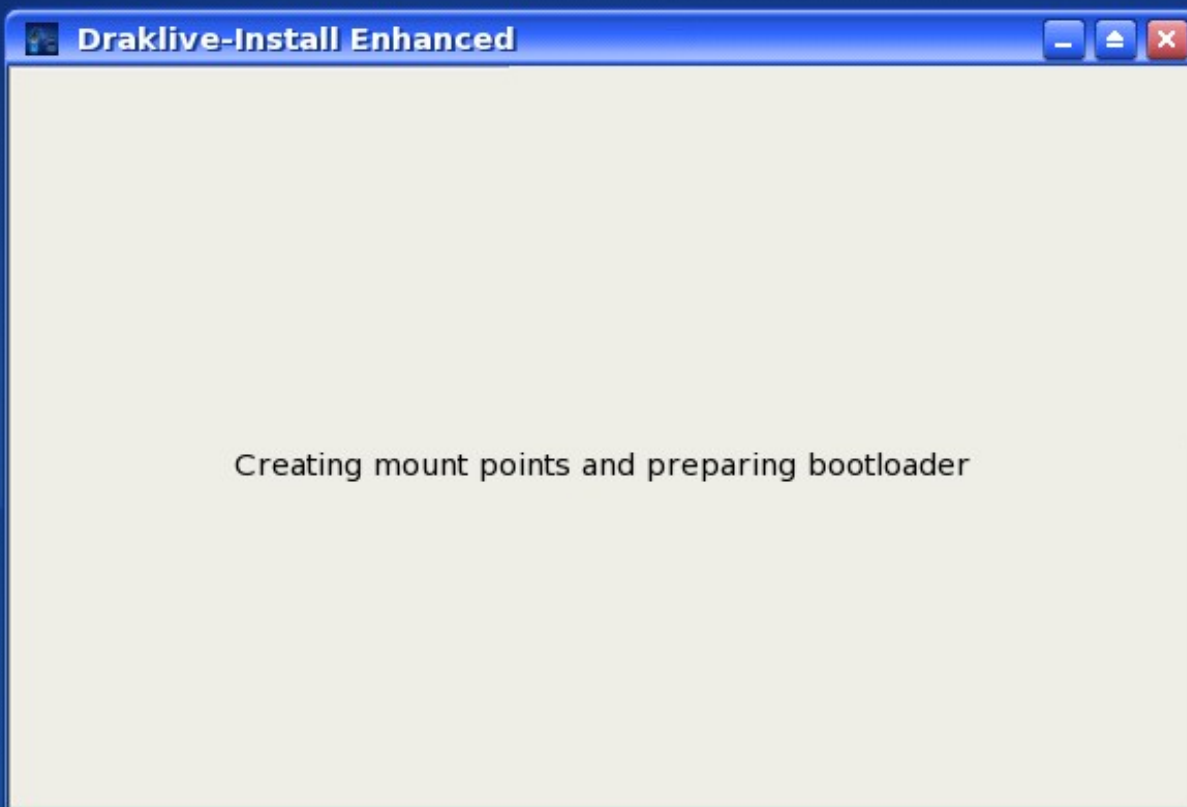
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Bootloader

Bootloader to use GRUB with graphical menu

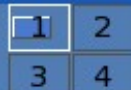
Boot device /dev/hda (WDC WD100BA)

Main options

Delay before booting default image 10

☒ Enable ACPI

Cancel Advanced Next



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Draklive-Install Enhanced

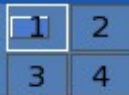
Here are the entries on your boot menu so far.
You can create additional entries or change the existing ones.

linux (/boot/vmlinuz) *	Add
	Modify
	Remove

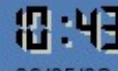
Cancel

Previous

Finish



Draklive-Install Enha



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Installation
Help



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Computer



Trash



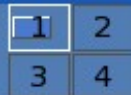
GEEKME
NU

Draklive-Install Enhanced

Set administrator (root) password

Password

Password (again)



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Home



Installation
Help



Install
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Konsole



My
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Trash



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Draklive-Install Enhanced


Enter a user

Real name

Login name

Password

Password (again)

Icon 



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Home



Installation
Help



Install
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Konsole



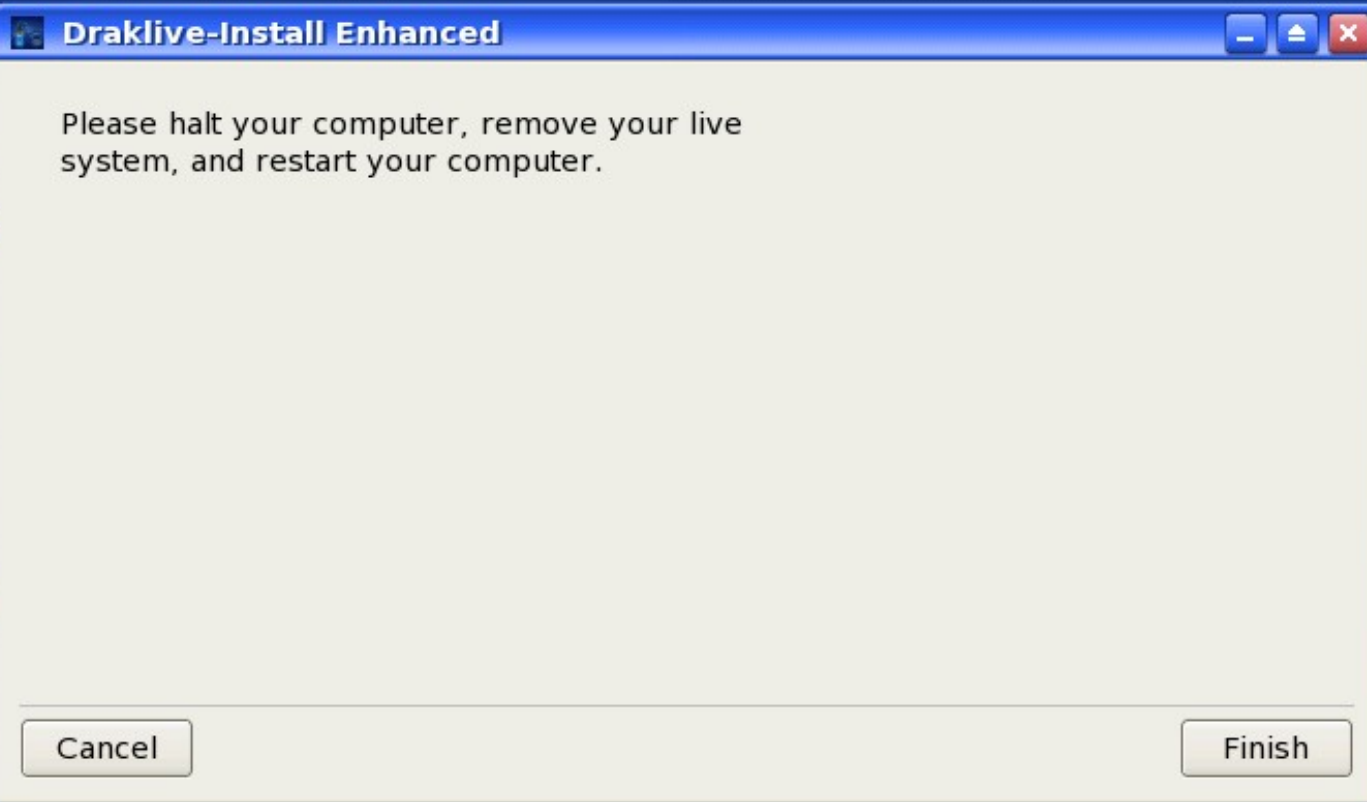
My
Computer



Trash



GEEKME
NU



10:46

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Finally!

- Okay, we are done! We have seen that you can install to usb flash drives and hard drives and that there are many different kinds of installers that all vary in their steps and complexity.
- Now! Any questions???

Notes.

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- All websites are properties of their respective owners.
- Ubuntu screenshot(3d) supplied by the Ubuntu community website
- All other screenshots not supplied by me are supplied by the PuppyLinux community.(hosted by John Murga)