

Using Live CDs to evaluate a computer for Linux compatibility.

The following notes outline some suggestions that I have found useful to check that hardware will be reasonably Linux compatible. There are, of course, many other tasks for which a Linux Live CD/DVD can be used.

Preparation

I suggest that the first Live CD you try is Knoppix - the hardware detection routines are comprehensive and if not sure about the hardware detected Knoppix will assume conservative defaults, which is particularly appropriate for old hardware. If you are unable to check out a particular hardware device (eg/. an internal modem) you can try a different Live CD, eg/. Mandriva One, which has a different setup routine for the "difficult" device, and see if the different setup routine helps.

The next thing I'd suggest is to copy a group of files that represent a typical set of working files to a USB memory drive. Make sure that your selection contains examples of files you use for any program which is critical to your Linux use.

Next, you might like to load the Knoppix Live CD into MS Windows and view the files ...

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index_en.html
knoppix_faq.html
knoppix_cheatcodes.txt
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for tips on using a Knoppix Live CD.

Boot Live CD with minimal options.

Make sure that your computer is set to boot from the CD/DVD first, and boot the Knoppix CD by simply pressing Enter at the boot prompt. If the system does not complete the boot process with a full screen desktop, try again with less demanding video options, eg/. framebuffer mode (especially for laptops). You may want to refer to the Knoppix "cheatsheet" or FAQ.

Note that for LCD screens, especially on laptops, it is a good idea to find out the native (or optimum) resolution. This will help if you need to use a framebuffer mode as you can specify the optimum resolution.

Consider booting into Icewm window manager (use the 'desktop=icwm' option) for older, memory constrained computers as this will speed things up considerably. The default window manager is KDE.

When you have the desktop running ..

- check the battery monitor is running and giving sane indications (for laptops only)
- check the clock is showing (nearly) correct time.
- If the desktop plays a startup sound file, then the sound card has been set up OK. If nothing is heard, try the checks under 'Audio' below.
- The desktop should take up all the display - some Live Cds will only display a smaller desktop, particularly on laptops, which although it works OK, leaves a blank area of the screen around the outer edges.

Removable Media

Next plug in a USB memory drive, and check that it is correctly detected and that you can browse the files therein.

Audio

Now select a media player from the start menu, and see if you can play a freely available mp3 file. Note that you may not be able to play "commercial" mp3s because of copyright restrictions.

Microsoft Compatibility and Printing

Next, start up OpenOffice and see if you can read in a previously prepared document. If it is important to you that you can print with a specific printer, try to organise that printer to be on hand when you are using the Live CD, and see if you can set up the printer and print OK.

If there are other aspects of OpenOffice that you need to be working, see if you can read in a file to check out that aspect, eg/. a Powerpoint presentation and/or spreadsheet.

Graphics / Multimedia

Start up a file manager, eg/. konqueror, and browse to a directory where there are graphics and multimedia files. See if they will play when double-clicked.

Alternately, start the relevant multimedia/sound program, and select the file as input to the program.

The video player programs will generally tell you if you need extra codecs.

Dial up Internet

Use the relevant network setup tool (eg/. Kppp) check out setting up a dialup connection. You may find that a winmodem is detected and that the Live CD doesn't include software to make it work, or that no such software exists. On the other hand, another live CD may either work or give you extra information to enable you to get drivers etc that will get you going.

If you have an external modem or a PCMCIA modem, plug it in and see if the system will detect it. If the configuration software can detect the newly plugged in modem, run the modem configuration program and see if you can establish an internet connection.

Browse to <http://grc.com/> and check the setup by using the "Shields Up" page to run a vulnerability check on all ports. Save the resulting web page to your USB drive for later evaluation, and shut down the internet connection.

Printers.

If you have a printer handy, try to set it up and print to it. Use

Knoppix -> settings -> printers -> Administrative mode.

and run the add printer wizard. You may need to restart the CUPS server.

Other Live CDs will have equivalent printer setup routines.

You should now have a good idea how compatible the computer under test is with Linux. Generally speaking, I have found that if a computer can run a Live CD desktop "out of the box" (with maybe a specific video setting at boot time), and it will cope with the majority of the tasks outlined above, it will usually be satisfactory.

If you install a Linux distribution on the computers' hard drive after following the above checks, you may need to make some adjustments to get optimal results.

However, do make sure that any tasks that are critical to your use of Linux can be completed before reaching a final decision. You may want to use a couple of Live CDs, each from a different distribution, to make sure that all is well.