Subject: Re: speed up the display on Linux
Posted by Randall Skelton on Wed, 12 Jun 2002 09:18:10 GMT
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Hi Sam,

It seems you have run square into one of the poorly documented costs of running a _free_ operating system on cheap _commodity_ hardware. It was way easier when you could just call up Digital, Sun or SGI and request hardware support. Of course, it is nice being able to by a workstation for under $10K and being able to run bleeding-edge hardware. Installing a modern-day Linux distribution gets you a relatively unoptimized system with plenty of generic 386/Pentium binaries. While detecting hardware during an install has improved considerably in modern distributions, in many cases, the drivers installed are well out of date. In my experience, to properly setup and optimize a Linux workstation you need to spend a few days searching the web with Google and then a few days re-compiling and patching your distribution. If you don't already know how to do this, then expect to destroy your OS at least once or twice while you learn during the next few months.

With regard to object graphics, for the best performance you need to adjust your retain settings (as you have done) and ensure you are using _hardware_ openGL acceleration. I would start by issuing a 'xdpyinfo' at the terminal and reading through the output. Likewise, with 'glxinfo'. The latter command will tell you whether you are using direct hardware rendering or not, but in order to debug why this is the case you may need the results from xdpyinfo. You should also parse through the XFree log file in '/var/log/XFree86.*.log' looking for initialization errors. Ancillary commands include 'xwininfo' and 'xprop' (see man pages).

Your default installation will probably be using a maxtor driver but it may not be the most current or be setup correctly. Likewise, you need to ensure that 16MB of RAM is indeed enough memory to run hardware acceleration at the resolution and color depth you are running (i.e. to display 1200x1600 @ 32 bbp you need more than 22 MB video RAM for hardware acceleration). You may want to compile the latest version of XFree 4.2.0 from source and install the latest Maxtor drivers. Installing the latest generic XFree binaries (i.e. rpm) probably will not be of much help and (in my experience) will usually break something. If you are using the latest beta driver from Maxtor then you can use their nifty 'mgapdesk' utility to configure X.

You will want to read through the following sites (paying particular attention to the FAQs):

http://www.matrox.com/mga/support/drivers/latest/home.cfm
http://forum.matrox.com/cgi-bin/mgaforum/Ultimate.cgi

http://dri.sourceforge.net/
http://www.xfree.org

Typically, the best people to ask about graphics acceleration are game players. Nevertheless, assuming you have a support contract, you may be able to get some help from the folks at RSI.

Sorry I cannot be of more help, but you are now entering the realm of Linux hackery and I don't want to be the one responsible for breaking your XFree installation.

Good luck,
Randall

> We are running this program on a Mandrake 8.0 linux. The XFree
> version is 4.0.3. (>rpm -aq | grep xfree; XFree86 4.0.3) Our video
> card is Matrox Graphics Inc. Millennium G400 16MB MGA G400 AGP.
>
> We assume the drivers is runing fine but it would be better to show
> us how to double check that. Could you please also show us how to
> enable the hardware OpenGL acceleration? Thank you very much.
>
> Sam
>
> Randall Skelton <rhskelto@atm.ox.ac.uk> wrote in message
news:<Pine.LNX.4.33.0206110056250.15469-100000@moriarty.atm.ox.ac.uk>...
>> What video card do you have? Do you have proper XFree drivers for your
>> card installed? Which version of XFree are you using? Is XFree running
>> with hardware OpenGL acceleration enabled?
>>
>> Cheers,
>> Randall
>>
>> On 10 Jun 2002, Sam Hou wrote:
>>
>>> Dear all,
>>> Hope someone can help us with this one. We have a IDL program
>>> which allows user to rotate, rescale a 3D mesh interactively. It is
>>> running well in window. However, it becomes extremely slow on Linux.
>>> It is almost useless. I am wondering if we can speed up this program
>>> on Linux. I have found that a lot of people has the same problem. I
>>> just want to make sure whether there is a solution beside buying a
>>> windows IDL lincense.
>>>
>>> Sam
>>>

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