
Subject: Re: Object Graphics Windows in X Windows

Posted by [lasse](#) on Fri, 07 Mar 2008 07:31:54 GMT

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On 7 Mar, 05:15, David Fanning <n...@dfanning.com> wrote:

> Folks,
>
> I presume I'm the last to hear about this, but I learned
> about an X server that runs on Windows the other day,
> named Xming:
>
> <http://sourceforge.net/projects/xming>
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> It is very nice, and it's free. :-)
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> After installing it on my Windows machine, I can log
> into my LINUX box at work from home and see my calendar,
> e-mail, EMACS, and even the IDL Workbench! Wow. Who knew!?
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> It works great, except that the darn thing cannot
> display any kind of object graphics window. This is
> a HUGE disappointment, naturally, as I can't use my
> iTools. ;-)
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> Is this an IDL problem, do you think, or an X server
> problem? Would I have to do some kind of tweak to get
> this to work? Any info is helpful.
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> Cheers,
>
> David
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:<http://www.dfanning.com/>
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Hi,

I am not sure if this answers your question but if you are looking for a possibility to connect to a Linux box from a Windows machine for free you might want to have a look at the NxClient/Server here:

<http://www.nomachine.com/products.php>

They have a free edition which allows a maximum of two users to connect to the Linux box. If you want/need more you have to pay.

Essentially, NxClient gives you the Linux Desktop in a Windows window and allows you to work on your Linux machine as usual. The

communication is done over SSH. It even enables copy-paste between the two machines.

If that helps...
Lasse Clausen

Subject: Re: Object Graphics Windows in X Windows
Posted by [Nigel Wade](#) on Fri, 07 Mar 2008 09:10:24 GMT
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Lasse Clausen wrote:

```
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> and allows you to work on your Linux machine as usual. The
> communication is done over SSH. It even enables copy-paste between the
> two machines.
>
> If that helps...
> Lasse Clausen

It also has the great advantage that it can compress the X protocol traffic.
This is of great help, as X is quite chatty between the client and the server,
when you are connected over slow or long latency lines, like ADSL at home.

It appears to handle object graphics, at least the demos run...

--

Nigel Wade, System Administrator, Space Plasma Physics Group,
University of Leicester, Leicester, LE1 7RH, UK
E-mail : nmw@ion.le.ac.uk
Phone : +44 (0)116 2523548, Fax : +44 (0)116 2523555

Subject: Re: Object Graphics Windows in X Windows
Posted by [Ding](#) on Fri, 07 Mar 2008 13:56:40 GMT
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On Mar 7, 12:15 pm, David Fanning <n...@dfanning.com> wrote:

> Folks,
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> about an X server that runs on Windows the other day,
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Hi,
It seems like a Xserver problem, because I used X-win32 doing same
stuff and no problem appeared, when I turned to Xming I had same
problem.
I hope this can help you.

By the way, thank you for your book <IDL Programming Techniques>, I'm
a new user of IDL and it helps me a lot!

--
Ding

Subject: Re: Object Graphics Windows in X Windows
Posted by [Norbert Hahn](#) on Fri, 07 Mar 2008 14:11:06 GMT
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David Fanning <news@dfanning.com> wrote:

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> display any kind of object graphics window. This is
> a HUGE disappointment, naturally, as I can't use my
> iTools. ;-)
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> Is this an IDL problem, do you think, or an X server
> problem? Would I have to do some kind of tweak to get
> this to work? Any info is helpful.

It might be an IDL problem. I use Xming on my Windows system
and work on several Linux computers. Some application have
problems opening the display.

When I look at the environment variable DISPLAY usually I get
echo \$DISPLAY
localhost:10.0

which might tell the X Client (iTools in your case) that you are
working on a local X Server (that part of the X Window system
where your screen, keyboard ... are connected to).
If the application tries to use a short cut for a local server
this may fail. I don't know if this is the case but iTools isn't
the only application that fails with Xming.

Norbert

Subject: Re: Object Graphics Windows in X Windows
Posted by [KRDean](#) on Fri, 07 Mar 2008 14:52:57 GMT
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On Mar 6, 9:15 pm, David Fanning <n...@dfanning.com> wrote:

> Folks,
>
> I presume I'm the last to hear about this, but I learned
> about an X server that runs on Windows the other day,
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Yep! Your the last to hear about it.

I have been using Xming on the office Windows XP desktop for years. It works just fine for displaying all my IDL widget applications (IDL 6.3) that run on the UNIX and Lunix boxes we us here. I fined it works much better than Exceed, Exceed onDemand, even Cygwin/X (another free XServer), which are common choices around here.

I'll use PuTTY to login into the desired UNIX or Linux box and send the output to my trusted Windows XP desktop. By the way, PuTTY is design to work with Xming.

However, I use a MSDOS command file to launch Xming from my desktop. I believe the secret to getting a display on your Windows desktop is to have the right settings.

This is what I use in the StartXming.bat that has a shortcut on my desktop display

```
c:
cd \Program Files\Xming
SET DISPLAYNO=0
start Xming -ac :%DISPLAYNO% -emulate3buttons -multiwindow -
multimonitors -clipboard -clipupdates 5
```

Happy Friday!

Kelly Dean
Fort Collins, CO

Subject: Re: Object Graphics Windows in X Windows
Posted by [Vince Hradil](#) on Fri, 07 Mar 2008 15:56:05 GMT
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On Mar 7, 8:52 am, kBob <KRD...@gmail.com> wrote:
> On Mar 6, 9:15 pm, David Fanning <n...@dfanning.com> wrote:
>
>
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> desktop display
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> cd \Program Files\Xming

> SET DISPLAYNO=0
> start Xming -ac :%DISPLAYNO% -emulate3buttons -multiwindow -
> multimonitors -clipboard -clipupdates 5
>
> Happy Friday!
>
> Kelly Dean
> Fort Collins, CO

David - have you tried VNC? (such as RealVNC). How does that compare?

Subject: Re: Object Graphics Windows in X Windows
Posted by [R.G. Stockwell](#) on Fri, 07 Mar 2008 19:22:22 GMT
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"David Fanning" <news@dfanning.com> wrote in message
news:MPG.223a6f373da1440998a2b5@news.frii.com...
> Folks,
>
> I presume I'm the last to hear about this, but I learned
> about an X server that runs on Windows the other day,
> named Xming:

I use VNC (TightVNC) to access my linux desktop from my laptop,
and it works very well. One nice feature is that you can have multiple
people log on and share a desktop (i.e. to broadcast a meeting for
instance).

Another very nice feature is that you can go to that exact same desktop
from anywhere (different computers etc), so what I do is start a month long
number crunching routine in vnc on the desktop, then log in from work
to check the progress. Later than night log in from home to check it again.
Quite handy for a compute machine.

In fact, I don't even have my desktop hooked up to a monitor or keyboard,
I do all the interface via VNC from my laptop. Which allows me to do an
extended monitor with my laptop LCD, and my giant desktop LCD. nice.

Cheers,
bob

Subject: Re: Object Graphics Windows in X Windows
Posted by [R.G. Stockwell](#) on Fri, 07 Mar 2008 19:25:57 GMT
[View Forum Message](#) <> [Reply to Message](#)

"R.G. Stockwell" <nothanks@noemail.com> wrote in message
news:fqs4lj\$ fj3\$1@aioe.org...

>

> "David Fanning" <news@dfanning.com> wrote in message

> news:MPG.223a6f373da1440998a2b5@news.frii.com...

...

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> and it works very well. One nice feature is that you can have multiple

> people log on and share a desktop (i.e. to broadcast a meeting for

> instance).

PS I just verified that I-tools do indeed work under VNC remotely.

Cheers,

bob

Subject: Re: Object Graphics Windows in X Windows
Posted by [Vince Hradil](#) on Fri, 07 Mar 2008 20:59:59 GMT

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On Mar 7, 1:25 pm, "R.G. Stockwell" <notha...@noemail.com> wrote:

> "R.G. Stockwell" <notha...@noemail.com> wrote in message

>

> news:fqs4lj\$ fj3\$1@aioe.org...

>

>

>

>> "David Fanning" <n...@dfanning.com> wrote in message

>> news:MPG.223a6f373da1440998a2b5@news.frii.com...

> ...

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>> instance).

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> PS I just verified that I-tools do indeed work under VNC remotely.

>

> Cheers,

> bob

That's what I wanted to hear. Thanks.

Subject: Re: Object Graphics Windows in X Windows
Posted by [Karl\[1\]](#) on Fri, 07 Mar 2008 22:45:24 GMT

On Mar 7, 2:59 pm, Vince Hradil <hrad...@yahoo.com> wrote:
> On Mar 7, 1:25 pm, "R.G. Stockwell" <notha...@noemail.com> wrote:
>
>> "R.G. Stockwell" <notha...@noemail.com> wrote in message
>
>> news:fqs4lj\$3\$1@aioe.org...
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>>> "David Fanning" <n...@dfanning.com> wrote in message
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>> Cheers,
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> That's what I wanted to hear. Thanks.

I noticed that Xming has a file in their download section with 'mesa' in its name. This may give you (Fanning) the 3d support you want.

Not all X servers support OpenGL. Xming strikes me as a sort of lightweight product that has minimal frills. So, they probably made the GL support, which is not a lightweight feature, an option.

I'd suggest that David download and try the 'mesa' option. I couldn't find many docs on that Sourceforge site and I have not played with this X server myself, so I cannot say much more about it.

The other poster who said they were using IDL with Xming just fine was apparently only using Direct Graphics, which is pure X protocol.

X servers that support OpenGL over a remote connection do so via the GLX extension to the X protocol, which is basically a protocol wrapper for OpenGL graphical elements.

As an X client, what IDL is *supposed* to do if it hooks up to a remote X server that supports GLX is to send GLX protocol for Object Graphics. If the server does not support GLX, IDL should render OpenGL to a local software buffer, and then blit that to the X server via X protocol.

On a remote connection, each of these methods have a different "wire cost". The GLX connection performance will depend on the complexity of the scene in terms of number of primitives, etc. The software rendering path will be a consistent wire load, the cost of blitting a window-sized bitmap.

If the user forces software rendering, IDL will render the scene using software and send the buffer to the X server.

These same principles apply to a local environment, client and server on the same machine, except that there is a "direct" connection between the X client IDL, and the X server, where the 3D commands are sent more directly to the graphics processor for performance reasons.

Now, as a server, the Xming product itself with the mesa option may or may not hardware accelerate OpenGL. Since the name of their optional module is 'mesa', that suggests software rendering, but that may not be the case - it could easily be hardware accelerated. It depends on how Xming was implemented. And Mesa supports hardware accel OpenGL on many platforms and devices. (Mesa is the OpenGL lib used to implement GL on Linux and other environments)

I've seen really good performance running a remote OpenGL app and having it display on the Linux based X server with hardware accelerated OpenGL in front of me. As long as the protocol traffic didn't get too large, it worked quite well.

These technologies (X, GLX, and Xming) are quite different from the "remote desktop" approach to remote computing. In the former, you have an application, or set of applications, sending protocol to the server. For a remote desktop situation like VNC, you're rendering the entire desktop on the remote side and doing an efficient desktop "copy" operation to the client viewing program, using special tiling algorithms.

The X VNC server presents itself as just an basic X "framebuffer" server to the attaching X client, and usually does not support GLX. (If it did support GLX, it would likely be a software implementation). If the attaching X client is IDL, IDL would see that there is no GLX, and then revert back to software rendering and send a bitmap with the result to the X VNC server. That's why IDL and I-Tools work with VNC. IDL is probably using software rendering here.

Karl

Subject: Re: Object Graphics Windows in X Windows
Posted by [David Fanning](#) on Fri, 07 Mar 2008 23:07:33 GMT
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Karl writes:

> I noticed that Xming has a file in their download section with 'mesa'
> in its name. This may give you (Fanning) the 3d support you want.

Ah, it sure does! Thanks, Karl. And thanks for all the
good information, too.

Cheers,

David

--

David Fanning, Ph.D.
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Sepore ma de ni thui. ("Perhaps thou speakest truth.")
