
Subject: Re: IDL without X on Linux

Posted by [David Fanning](#) on Thu, 03 Mar 2005 14:32:24 GMT

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Benjamin Hornberger writes:

> can I start IDL on Linux without an X server available? I frequently run
> IDL on a Linux machine remotely, logged on from a Windows machine. If
> the Windows machine doesn't run an X server at that moment, IDL won't
> start ("X connection to localhost:11.0 broken (explicit kill or server
> shutdown)").
>
> I know I somehow can run (non-interactive) IDL programs from a cronjob,
> as long as they don't involve windows.
>
> I found the section "Command Line Options for IDL Startup" in the help
> file, but it doesn't mention anything :-{.

Have you tried setting the graphics output device to NULL?

```
Set_Plot, 'NULL'
```

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Subject: Re: IDL without X on Linux

Posted by [Benjamin Hornberger](#) on Thu, 03 Mar 2005 14:46:18 GMT

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David Fanning wrote:

> Benjamin Hornberger writes:
>
>
>> can I start IDL on Linux without an X server available? I frequently run
>> IDL on a Linux machine remotely, logged on from a Windows machine. If
>> the Windows machine doesn't run an X server at that moment, IDL won't
>> start ("X connection to localhost:11.0 broken (explicit kill or server
>> shutdown)").
>>

>
> Have you tried setting the graphics output device to NULL?

```
>  
> Set_Plot, 'NULL'
```

That helped! Actually, I realized it was enough to take the device commands out of the startup file. Now I only need a way to start with different startup files. I guess I'll have to use bash scripts for that...

Thanks,
Benjamin

Subject: Re: IDL without X on Linux
Posted by [Liam Gumley](#) on Thu, 03 Mar 2005 16:20:06 GMT
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Benjamin Hornberger wrote:

```
> Hi all,  
>  
> can I start IDL on Linux without an X server available? I frequently run  
> IDL on a Linux machine remotely, logged on from a Windows machine. If  
> the Windows machine doesn't run an X server at that moment, IDL won't  
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> shutdown)").  
>  
> I know I somehow can run (non-interactive) IDL programs from a cronjob,  
> as long as they don't involve windows.  
>  
> I found the section "Command Line Options for IDL Startup" in the help  
> file, but it doesn't mention anything :-(.  
>  
> Thanks,  
> Benjamin
```

It is sometimes useful to run your IDL programs, graphics and all, even when you don't have an X connection. For this purpose, the Xvfb (X virtual frame buffer) utility is incredibly handy:

<http://www.rsinc.com/services/techtip.asp?ttid=2382>

If you want to run IDL graphics programs in the background, Xvfb is highly recommended.

Cheers,
Liam.
Practical IDL Programming
<http://www.gumley.com/>

Subject: Re: IDL without X on Linux

Posted by [Michael Wallace](#) on Thu, 03 Mar 2005 17:27:48 GMT

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Here's how to run IDL without X.

1.) If you can modify source code and do not need to make plots

Just simply avoid any calls to device or other command that'd have the effect of trying to produce a window on the screen (plot, window, etc).

It's probably best to be explicit and set the plotting device to NULL.

2.) If you can modify source code and you need to make plots

Set the plotting device to the Z-buffer (set_plot, 'Z') and leave it that way. Your plots will now be going to an "offscreen" device that will not be displayed anywhere, but everything all the plotting commands will still work.

If using Object Graphics, use IDLgrBuffer instead of IDLgrWindow.

3.) If you can't modify source code and the code needs an X server

Download Xvfb, run it and set the DISPLAY variable to the Xvfb session.

Xvfb (X virtual frame buffer) is basically an X server which runs offscreen and doesn't need to have any physical display. Programs which need X servers don't realize that it's running off screen. Let's say that I start an Xvfb session on server 1, screen 0. Before running the IDL program you'd need to set the DISPLAY environmental variable to your_machine_name:1.0. Typically I will write a little shell script that sets the DISPLAY and then runs my IDL program. That way I don't have to remember to set DISPLAY each time.

Benjamin Hornberger wrote:

> Hi all,

>

> can I start IDL on Linux without an X server available? I frequently run

> IDL on a Linux machine remotely, logged on from a Windows machine. If

> the Windows machine doesn't run an X server at that moment, IDL won't

> start ("X connection to localhost:11.0 broken (explicit kill or server

> shutdown)").

>

> I know I somehow can run (non-interactive) IDL programs from a cronjob,

> as long as they don't involve windows.

>

> I found the section "Command Line Options for IDL Startup" in the help
> file, but it doesn't mention anything :-(.
>
> Thanks,
> Benjamin

Subject: Re: IDL without X on Linux

Posted by [Benjamin Hornberger](#) on Thu, 03 Mar 2005 17:45:55 GMT

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Liam Gumley wrote:

> Benjamin Hornberger wrote:

>

>> Hi all,

>>

>> can I start IDL on Linux without an X server available? I frequently
>> run IDL on a Linux machine remotely, logged on from a Windows machine.
>> If the Windows machine doesn't run an X server at that moment, IDL
>> won't start ("X connection to localhost:11.0 broken (explicit kill or
>> server shutdown)").

>>

>> I know I somehow can run (non-interactive) IDL programs from a
>> cronjob, as long as they don't involve windows.

>>

>> I found the section "Command Line Options for IDL Startup" in the help
>> file, but it doesn't mention anything :-(.

>>

>> Thanks,
>> Benjamin

>

>

> It is sometimes useful to run your IDL programs, graphics and all, even
> when you don't have an X connection. For this purpose, the Xvfb (X
> virtual frame buffer) utility is incredibly handy:

>

> <http://www.rsinc.com/services/techtip.asp?ttid=2382>

>

> If you want to run IDL graphics programs in the background, Xvfb is
> highly recommended.

That's cool. Thanks a lot! David, that might be another article for your
web site.

Benjamin

Subject: Re: IDL without X on Linux
Posted by [David Fanning](#) on Thu, 03 Mar 2005 18:01:52 GMT
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Benjamin Hornberger writes:

> That's cool. Thanks a lot! David, that might be another article for your
> web site.

Done.

http://www.dfanning.com/misc_tips/noxserver.html

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Subject: Re: IDL without X on Linux
Posted by [Benjamin Hornberger](#) on Thu, 03 Mar 2005 18:06:02 GMT
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David Fanning wrote:

> Benjamin Hornberger writes:

>

>

>> That's cool. Thanks a lot! David, that might be another article for your
>> web site.

>

>

> Done.

>

> http://www.dfanning.com/misc_tips/noxserver.html

Great! Maybe you could add something like "... avoid any calls to
DEVICE ... EVEN IN YOUR STARTUP FILE". That was my problem in the first
place, why IDL wouldn't even start.

Benjamin

Subject: Re: IDL without X on Linux
Posted by [David Fanning](#) on Thu, 03 Mar 2005 18:10:14 GMT

Benjamin Hornberger writes:

> Great! Maybe you could add something like "... avoid any calls to
> DEVICE ... EVEN IN YOUR STARTUP FILE". That was my problem in the first
> place, why IDL wouldn't even start.

OK, I don't have anything else to do today. NOT! :-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Subject: Re: IDL without X on Linux

Posted by [Ken Mankoff](#) on Fri, 04 Mar 2005 14:30:00 GMT

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On Thu, 3 Mar 2005, Benjamin Hornberger wrote:

> That helped! Actually, I realized it was enough to take the device
> commands out of the startup file. Now I only need a way to start
> with different startup files. I guess I'll have to use bash
> scripts for that...

You can leave the device commands in the file and skip the bash,
doing it all in IDL. Here is the system I use.

- 1) I have my IDL_STARTUP env. var. pointing to idl.pro
- 2) I made a file link: % ln -s idl.pro idl_noX.pro
- 3) I have a bash alias: alias idl_noX='export IDL_STARTUP="idl_noX.pro"'
- 4) When I need to run without X, I type "idl_noX" at the CLI

Finally idl.pro (which is *also* idl_noX.pro) contains this:

```
env = GETENV( "IDL_STARTUP" )
IF ( STREGEX( env, 'noX', /BOOLEAN ) ) THEN x = 0 ELSE x = 1
IF x THEN device, true = 24
IF x THEN device, decomposed = 0
IF x THEN device, retain = 2
delvar, env, x
```

-k.

--
<http://spacebit.dyndns.org/>
