

# HOWTO: CDE and X-Windows Connectivity with AIX

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With some regularity I see questions about how to connect graphic applications to PC's running windows and/or Linux. Read more for some answers!

The oldest approach is to have an X-server package running. There are various commercial, shareware, and freeware packages available. I am not going to discuss the packages, only the basic steps needed to get AIX to connect to your X-server package.

Basically, for a single application, the easiest step to take is to export your display. For example, my PC has the address 192.168.129.27 and I am running a X-server package. On AIX I would enter:

```
$ export DISPLAY=192.168.129.27:0.0
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$ aixterm &
```

I can actually start any graphical application, for example firefox, but aixterm, xterm, and dtterm all load quickly and I have a verification that it is working.

To get the CDE desktop to start is a bit more complicated on the PC side. I have to configure the application to do a broadcast looking for X window clients. The actual steps will vary per product, but the setting name you want to look for is named (or should be in the help somewhere) is XDMCP query mode. There are three different ways to configure it. The most direct is to give the IP address, or resolveable hostname of the AIX system you want to connect to. The other modes are broadcast and indirect broadcast. The difference is which system does an XDMCP broadcast and the choices you get. Broadcast means your PC system does the broadcast and it connects to the first system that replies. Indirect Broadcast is actually a request to another to do a broadcast for your system and wait for that system to return a list of the systems that returns to it's broadcast. Then you choose one of these systems, and you see X window management system login screen (e.g., xdm, or CDE).

On Linux systems you will probably need to authorize the AIX system to connect. The basic command for doing this is xhost. If xhost does not exist, as some distributions do not install it by default, you will need to search for a X HOWTO for your distribution of Linux. Once you have that resolved, you can use the same export DISPLAY statement on AIX to get AIX to connect to your X server running on your Linux desktop.

The other basic setup requires installing some extra software on AIX and (generally) on your desktop. The software is vnc\_server. This software is available from the IBM AIX Toolbox (check vgBookmarks for a link) as a RPM install. Or you can get an installp package from the Bull software repository. The Bull software requires a second package from their site as well (zlib) as a prerequisite to install the vnc server.

I have only tried the RPM package once, on AIX 5.3 system, and it did not work immediately. I uninstalled that, and

installed the two Bull filesets, and ran vncserver command (set the PATH to include /usr/local/bin/) and make sure your hostname is of the "short" variety (felt03, not felt03.rootvg.net).

On your desktop you will need a vnc\_client installed. There are many of these, and have, as a drawback, that many virus scanners consider them a virus. Why goes beyond this article, but vnc had a period in which the clients were more than they appeared to be :).

Once you start the client, most ask for a hostname to connect to. You need to provide a hostname, and a "port". For my systems, 192.168.129.2:1 works fine (IP address 192.168.129.2, port 1). Actually, the port number is much higher, but vnc has a default base number, and I am connecting to that number plus 1.

To support unique sessions, start vncserver several times, and increase the port number. To password protect the sessions, use the command vncpasswd on AIX.

Hope this helps. If there are any questions, please post on the forums, and I'll answer there, and update here!