

NMR NOTES #18

Virtual Network Computing

The nmrsun1, nmrsun2 and nmrsun3 workstations have been set up with automatic vnc servers, so that it is possible to login and do NMR processing without using Xwin32 or some other X windows emulator. The X server runs on the Linux Workstation, and the local PC uses only a small viewer. For the Windows environment, this viewer is only 176K and will easily fit on a floppy disk. There are no shared libraries to install and it can be run directly from a floppy disk.

VNC viewers are available for Windows, Macintosh systems, and as source code for various unix flavors. Several of these are available for ftp from the Sun workstations (nmrsun1, nmrsun2 or nmrsun3). You can go to the directory /usr/local/pub/VNC_Viewers and find an appropriate file:

vncviewer.exe (Windows)

vnc-3.3.3beta2_68k_mac.sit (Macintosh);

vnc-3.3.3beta2_ppc_mac.sit (Power PC);

vnc-3.3.3r2_unixsrc.tgz (Unix source, tarred and gzipped);

The Macintosh files are compressed and will have to be unpacked to be used. The Windows file can be copied and executed directly. Unix source code is must be gunzipped, detarred, and compiled.

When you run the vncviewer program, you can enter the server name on the command line. If you don't, a dialog window will be opened and ask which server you wish to use. This is in the form hostname:display, where hostname is the host that you wish to connect to and display is the display number. Display 0 is the system console display, and display numbers 1 through 99 are available for users. Rather than explicitly starting a vncserver in order to get a display number, the NMR workstations have been set up to automatically start a server when you request a connection. The display number is then used only to choose a screen resolution. The display value defaults to 0, but since display 0 is reserved by RedHat for the system console, it is unavailable for remote use, and you must explicitly specify the display that you want to use. Display 1 is used to select 1024 x 768 pixel display size. This is the smallest practical display size to run VnmrJ. Display number 2 will choose a larger 1280 x 960 format screen, which is closer to the display size on the system consoles. The useful commands, therefore are:

vncviewer nmrsun2:1 for the normal 1024 x 768 desktop on nmrsun2;

vncviewer nmrsun2:2 for a larger 1280 x 960 desktop on nmrsun2;

In all of these commands, nmrsun3 or nmrsun1 can be substituted for nmrsun2. There is no difference between the three workstations.

In the Windows viewer, you may right-click on the title bar to get an options menu. The most useful option is the full screen mode, which eliminates the scroll bars and other Window dressings and leaves you with a screen that looks the same as you see on the workstation when you log in. CTRL-ESC followed by ESC will get you back to a task bar so that you may remove the full screen mode or chose other options. If your Xserver screen is larger than your PC screen size (e.g. 1280x960 on the Xserver and 800x600 on your Windows desktop), your desktop will act as a view port onto the Xserver display, scrolling automatically as you move the mouse cursor off the edge of the screen. This can be rather disconcerting and hard to get used to, but does let you have a virtual NMR display larger than your physical screen display.