

Accessing X Windows from the Computer Cluster in MH 4014

IRAF, like many other graphics-intensive applications running under Unix, requires X windows (technically called X11) to display graphics. Our goal here is to display, on a local Windows machine, X windows from applications running on *astro1*. For this purpose, we need to:

1. Start up Hummingbird Exceed, an X windows server — an application that creates X windows — on the local machine
2. Create a secure login connection to *astro1*
3. Enable the passing through or “tunneling” of the X window displays from *astro1* to the local machine

The following instructions take you through these steps in detail.

Log on to one of these machines, selecting the machine itself as the login domain.

Double click the Hummingbird Connectivity shortcut on the desktop.

In the window that opens, double click Exceed. Again, in the window that opens, double click Exceed.

Click ‘OK’ in the warning box that says, “Cannot create log file.” (The box may be initially hidden behind the main window.) An Exceed tool window should now open, but leave it alone for now. When you are familiar with this procedure, you can look into using the X startup tools in this window to automate this process. Exceed is now running.

Back on the desktop, double click the shortcut to the SSH Secure Shell client. SSH is a method of making an encrypted login connection between two computers.

In the SSH window, click “Profiles,” then “Edit Profiles.” Click the “Tunneling” tab, and click a check box that says, “Tunnel X11 connections” if it is not already checked.

In the SSH window, click “Quick Connect.” In the dialog box that opens, for “Host Name,” type the IP address of *astro1*, 131.183.160.1 . The “Authentication Method” window should read, “<Profile Settings>.” Give your *astro1* user name and (when asked) password.

If you receive an error message that the host cannot be reached, reboot your machine.

When you see the *astro1* login prompt, type `xgterm&` and an Exceed xgterm window will open.

In xgterm, start IRAF. Be sure to use xgterm for graphics tasks. You can also start IRAF in the regular login window and use it for text-only tasks.

If your machine has a three-button mouse, the middle mouse button works for cutting and pasting as on a Unix/Linux machine. With a two-button mouse, clicking both mouse buttons together will emulate the middle mouse button.