

## Accessing Your NISL Accounts

1. You need to be on TAMU-Commerce local network. If off-campus, you will need to use VPN: <http://www.tamu-commerce.edu/ctis/help/Network/vpn.htm> Likewise if you have a laptop and want to use wireless, you will need to set up wireless VPN access: <http://www.tamu-commerce.edu/ctis/help/Network/wireless.htm>
2. You will be given an account and a password on the NISL machine/cluster, that is housed in Jour 204, for use this semester in CSci 553 / 414. The accounts will only be active this Spring 2008 semester, all information and data on the student accounts will be deleted at the end of the semester.
3. The hostname of our server is nisl.tamu-commerce.edu and the ip address is 10.19.0.115

### Accessing Account on Windows using SSH (Secure Shell)

1. If you have access to TAMU-Commerce local network, you should be able to use secure shell to get a command line interactive session on your NISL account.
2. On Windows you will need a SSH client. I recommend using one of these SSH clients on Windows: <ftp://ftp.ssh.com/pub/ssh/SSHSecureShellClient-3.2.9.exe> or <http://the.earth.li/~sgtatham/putty/latest/x86/putty.exe>
3. Use of your SSH client will vary depending on which one you have chosen. Normally once you start the client, you will simply need to connect to the NISL by providing the machine name or ip address and your username. The application will ask you for your password when it connects. The first time a SSH client connects to a server, it will warn you about an unknown host or authorization key. It is safe to accept the connection the first time, and the warning should disappear on subsequent connections from the same machine.
4. If you want to run X-Windows GUI applications from the nisl machine on your windows machine, you will need to either install and use an X-Window server or a technology known as VNC.

### Using X-Window Server to view GUI Applications on Windows over SSH

1. There are a few free X-window servers, though you may not be able to successfully install them if you don't have system administrator access (e.g. on the lab machine in Journalism building this might not work).
2. Cygwin is actually much more than an X-window server, it gives a complete Posix like environment on a Windows machine. But you can use its free X-window server to view nisl gui applications: <http://x.cygwin.com/>
3. I haven't used Xming, but it also claims to be a completely free X Window server for Windows: <http://sourceforge.net/projects/xming>
4. Once you have your X-window server installed, run it.
5. Connect to the nisl machine using your ssh client. Often there is an option in your ssh client that you can set to allow X-window forwarding automatically. In the SSH Secure Shell client for example, if you bring up Edit->Settings, and look at the Tunneling options, you can select that the client will Tunnel X11 connections.

6. If you can't find how to set up X-window forwarding/tunneling automatically, then instead once you are logged into nisl you can set up the forwarding by hand.
  - a. You need to know the ip address of your windows machine. Lets say your ip address is 10.1.2.3
  - b. Set your display to be forwarded by setting the DISPLAY environment variable \$ export DISPLAY=10.1.2.3:0
7. Once you have successfully set up forwarding, either by hand or by explicitly setting the DISPLAY environment variable, you should be able to run an X-window gui application on nisl, and it will be displayed on your client machine.

### Using VNC to view GUI Applications on Windows

1. An alternative to using an X-windows server is to use a VNC client/server connection.
2. Again, you first need to find and install a VNC client on your windows machine, but these are usually much smaller than X-windows servers.
3. I usually use and recommend the TightVNC client: <http://www.tightvnc.com>
4. Before you run the vnc client on your windows machine, you first need to have started up a vnc server on nisl
5. ssh over to nisl, and start a vnc server
  - a. \$ vncserver -geometry 1024x768
  - b. This actually runs a complete X desktop, and sets the desktop size at 1024x768. This should give you a VNC server number when you run the command, for example you might be vncserver #1. Remember this number.
6. When your vncserver is running on nisl, start the vnc client on your windows machine. You will need to provide the ip address of nisl and your username, as well as the vncserver number from step 5.b.
7. If successful, your client will connect and display a complete fedora core KDE desktop in a window.

### Connecting to NISL from a Linux Machine and Viewing X-Windows GUI Applications

1. If you are connecting from a Linux/Unix installation, it is usually much simpler to view X-windows GUI applications remotely, since usually X-windows and ssh will already be installed for you.
2. From a terminal, run ssh to connect to nisl, and specify the X windows forward option:
  - a. \$ ssh -X nisl.tamu.commerce.edu -l dharter
  - b. The above creates a ssh connection to nisl, and specifies that we should login as user dharter and set up automatic X window traffic forwarding. Of course you would use your own username instead of dharter.
3. Once logged into nisl, you should have X forwarding, already set up if you used the -X option, so starting a X-window GUI application should cause it to be displayed on your monitor.

**Connecting to NISL from CS Computer Lab Ubuntu Virtual Machines**

1. Double click on the VMWare server console icon to start a virtual machine
2. Select the localhost as the server to connect to and click OK
3. If the Ubuntu virtual machine is not already started, then Open an Existing Virtual Machine and select Ubuntu
4. This will open a new tab in the VM virtual console. Select Start this Virtual Machine on the left hand side to boot up the simulated x386 with Ubuntu installation.
5. After booting up, there is a standard username / password prompt. As of this writing (01/15/2008) the username is student and password is bluegold for the Ubuntu virtual machine installations.
6. Once logged into the Ubuntu desktop, you have a full Linux Gnome desktop environment to use. If you want to use your NISL account, it is easiest to use remote X applications as described in previous section on “Connecting to NISL from a Linux Machine and Viewing X-Window GUI Applications”
7. Specifically, open up a command line terminal by going to Applications -> Accessories -> Terminal
8. From the command line terminal, you can run the ssh command with X forwarding turned on to get into your NISL account:
  - a. `$ ssh -X nisl.tamu-commerce.edu -l dharter`
9. Once ssh'ed over to NISL, if you run a graphical X Window application it should appear on your desktop. For example, try running kate as an example of a simple programming editor you can learn to use:
  - a. `[dharter@nisl]$ kate`