

# Mars Cluster

## Guide to Using VNC

**Introduction:** VNC is a tool which allows a user to interact with the Mars Cluster using the Graphical User Interface (GUI) in addition to the terminal. Additionally, a user can open up a VNC session, begin work, shut down the window, then return at a later time (hours or days later) in order to pick up work in progress. This can be very useful if, for example, a user is running a program which takes a long time to complete but does not want to tie up lab computers while waiting for results.

**PLEASE NOTE** - Please review all steps carefully, especially when using VNC for the first time on the Mars Cluster. Omitting steps can cause problems - for example, it is important for a user to close up his/her VNC session properly when finished to avoid creating time consuming rogue processes on the cluster. Thank you!

**Getting Started:** Before you can access the GUI through VNC, you must start a vnc server through the terminal window. A program such as SSH Secure Shell Client (available for download via the help section of the Star Lab website) can be used for this purpose. You will need to first log into the Cluster in the usual way using a Linux userid and password. Once the command prompt comes up, you can set a password for use by VNC. Enter the following:

```
vncpasswd
```



*Figure 1: Example of vncpasswd command*

Next, you must start a vncserver. Upon doing so, you will be shown a session number. An example is shown in Figure 2 below. Record your session number. In the below example, the session number given is 4.

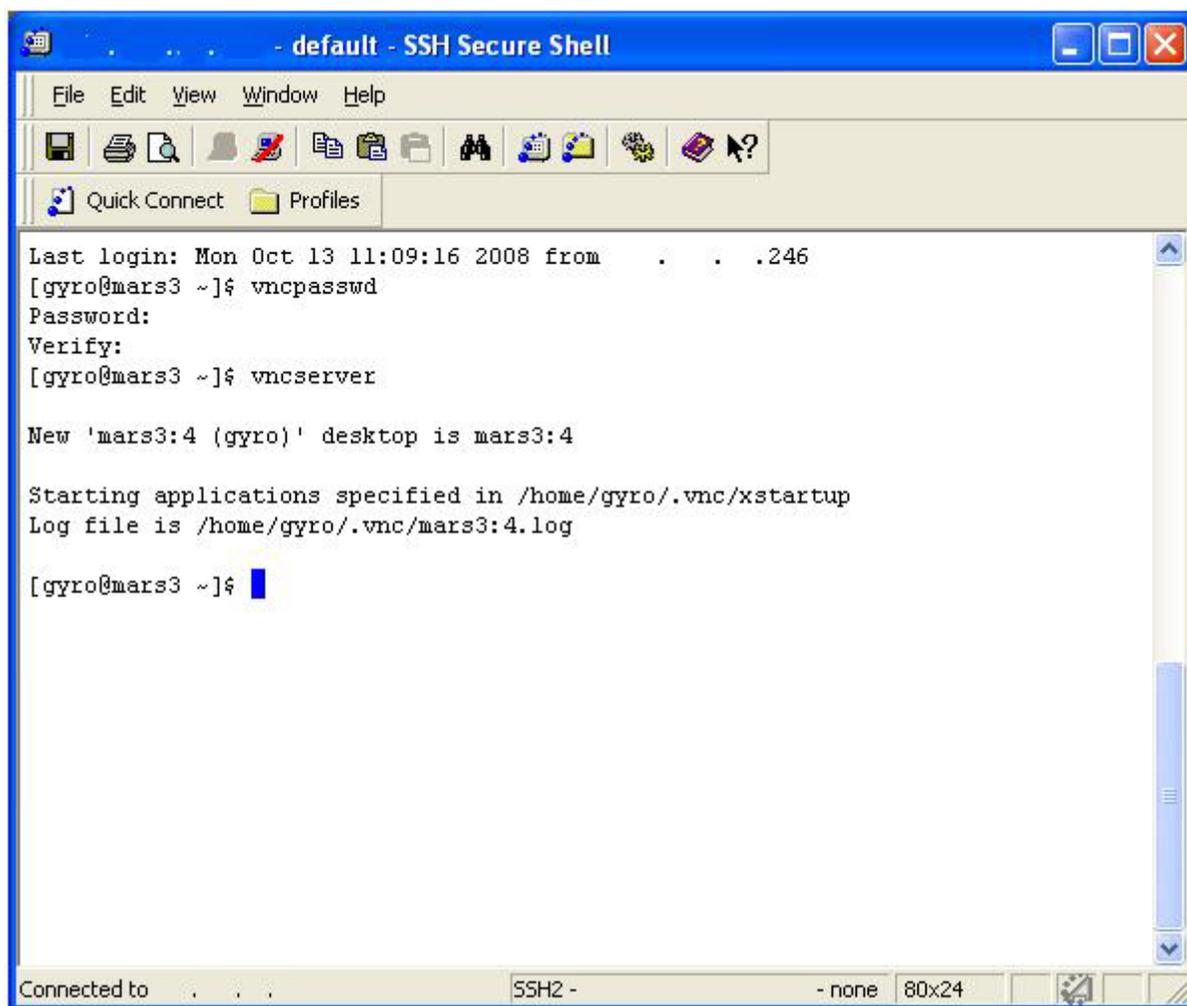


Figure 2 - issuing the vncserver command

Once you have your session number, you may log out of the terminal session using the exit command.

**Making the Connection with VNC:** With the vncserver command now running, you may connect with the GUI from any computer. This can be done using a tool called the TightVNC Viewer. This tool can be obtained from the Help section of the Star Lab website. Alternatively, a web browser can be used to make the connection - see the Appendix for details on that optional method.

Open the viewer and enter your target IP address and session number as shown in Figure 3. In this case, the user is trying to reach Mars3, so the IP address is xxx.xxx.xx.153.

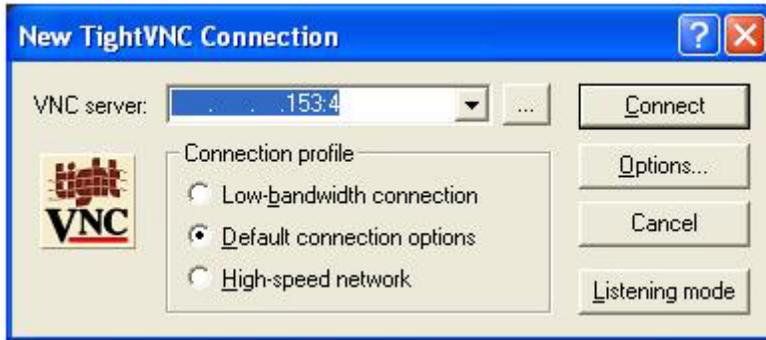


Figure 3 - Entering the target IP address and session number with TightVNC

Hit Connect and log in with the VNCPassword you set earlier.



Figure 4 - Entering the VNC password with TightVNC

Once you have entered the password, you will be able to access your session through the GUI.

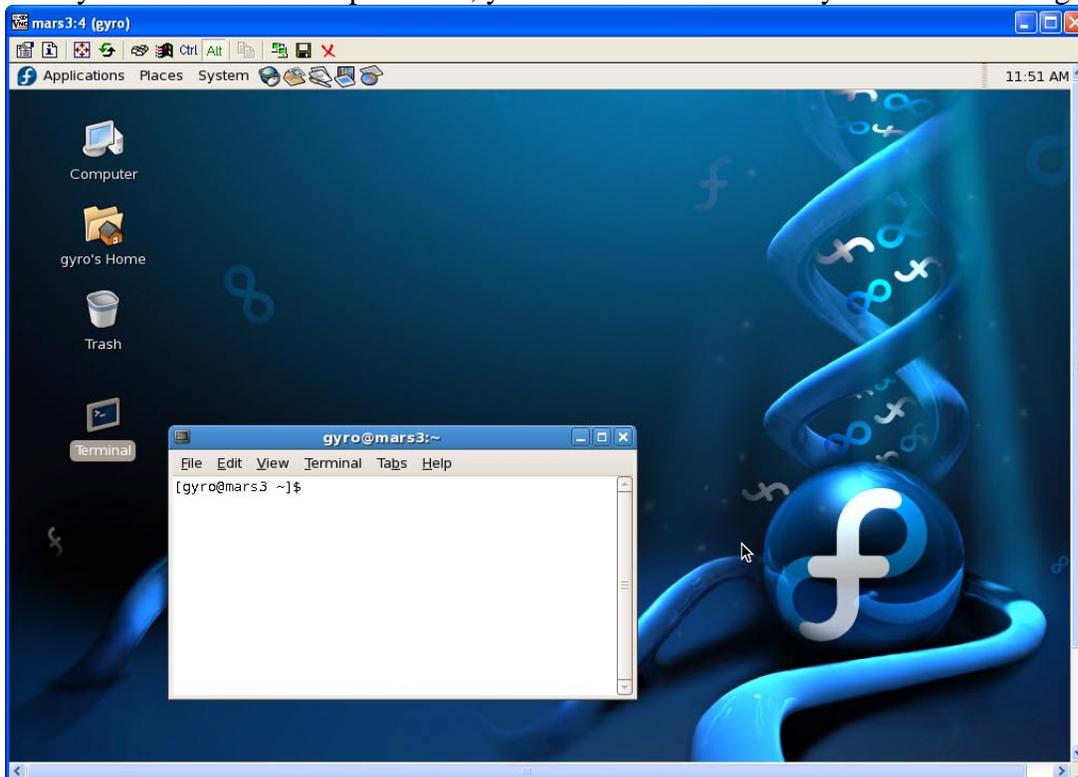
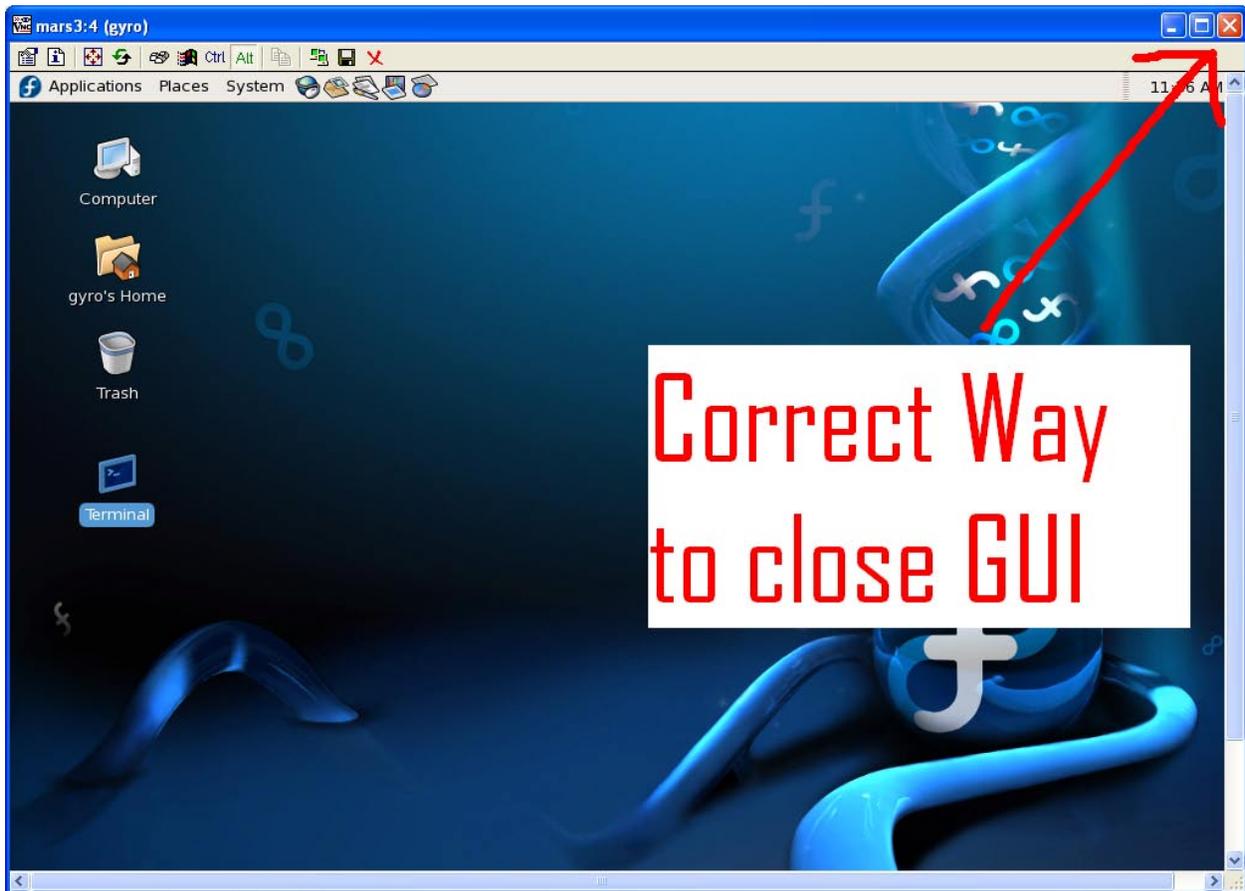


Figure 5 - Access granted through the TightVNC GUI interface

**Closing the GUI:** When you have finished checking on your project, you can close the GUI window. Doing so does not end your vncserver session - in other words, it will continue to run even after you close the GUI. This allows you to return to your project at a later time. In order to close the GUI, simply click on the red “X” in the upper right corner of the screen in order to close the window. **DO NOT** log out or try to close the GUI in any other way - if you do, you risk causing problems with your session.

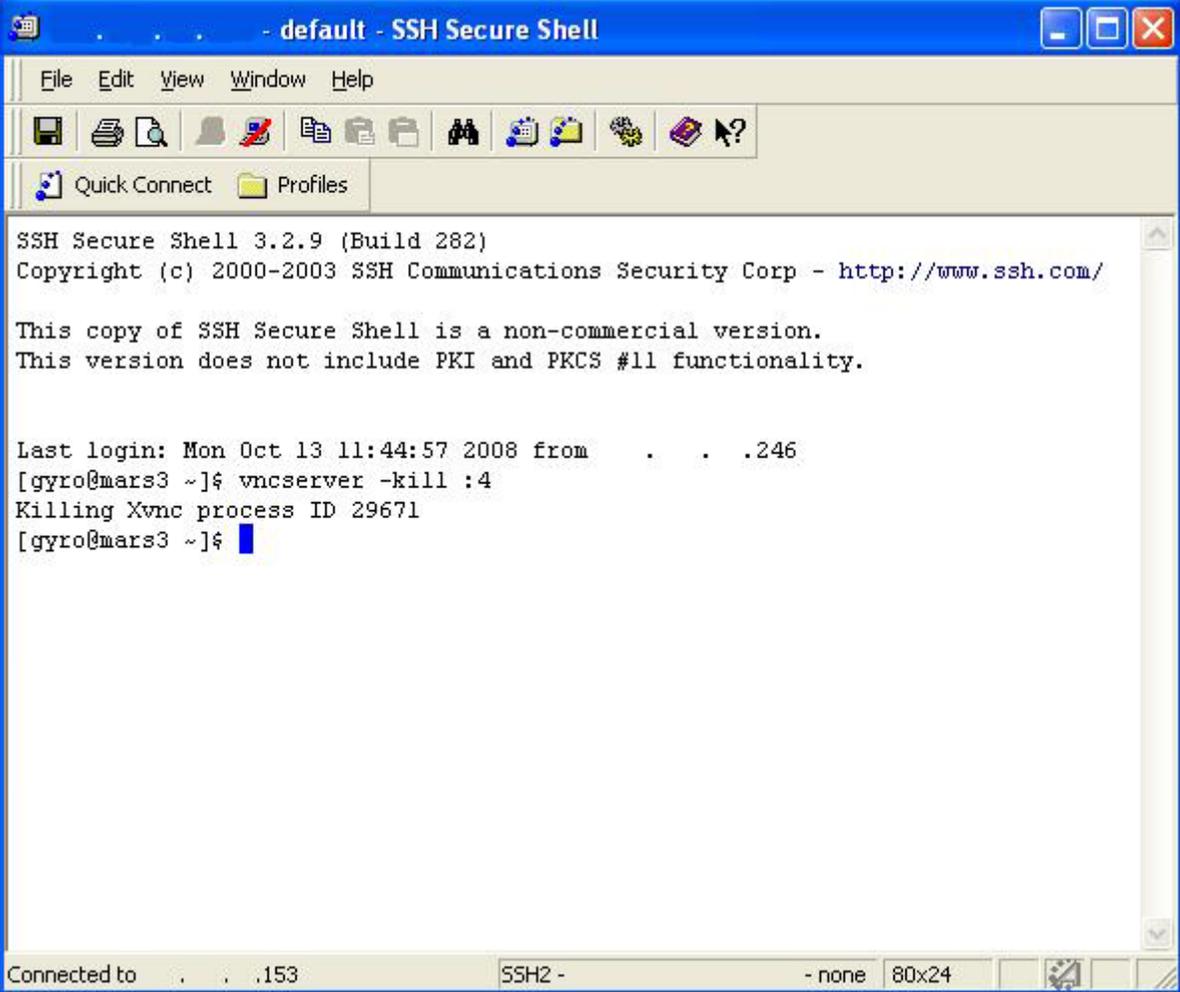


*Figure 6 - Click the red “X” as shown to close the GUI properly.*

**Ending your VNC Session:** When your project is completely finished, you are *strongly encouraged* to end your VNC session. This frees up CPU time for other users and other projects. To end your session, log in using SSH and issue the following command:

**vncserver -kill :sessionnumber**

In this example, the session number is 4. See Figure 7 for an illustration of this example.



```
SSH Secure Shell 3.2.9 (Build 282)
Copyright (c) 2000-2003 SSH Communications Security Corp - http://www.ssh.com/

This copy of SSH Secure Shell is a non-commercial version.
This version does not include PKI and PKCS #11 functionality.

Last login: Mon Oct 13 11:44:57 2008 from . . .246
[gyro@mars3 ~]$ vncserver -kill :4
Killing Xvnc process ID 29671
[gyro@mars3 ~]$
```

*Figure 7 - Issuing the vncserver kill command*

Your vnc session is now concluded. A new session can be opened by you at any time.

# Appendix

## How to connect to the GUI using an Internet Browser

In the above example, you connected to your vncsession using TightVNC. However, it is also possible to connect using an Internet Browser (ie Internet Explorer or Firefox) instead. The steps below show the method for doing so. It is assumed that the user has already started a vnc session as described above and already knows his/her session number.

Making the Connection with VNC: In this example, the user's session number is 4. First, open the Internet Browser (Internet Explorer in this example). In the address bar, type the following:

**`http://xxx.xxx.xx.153:5804/`**

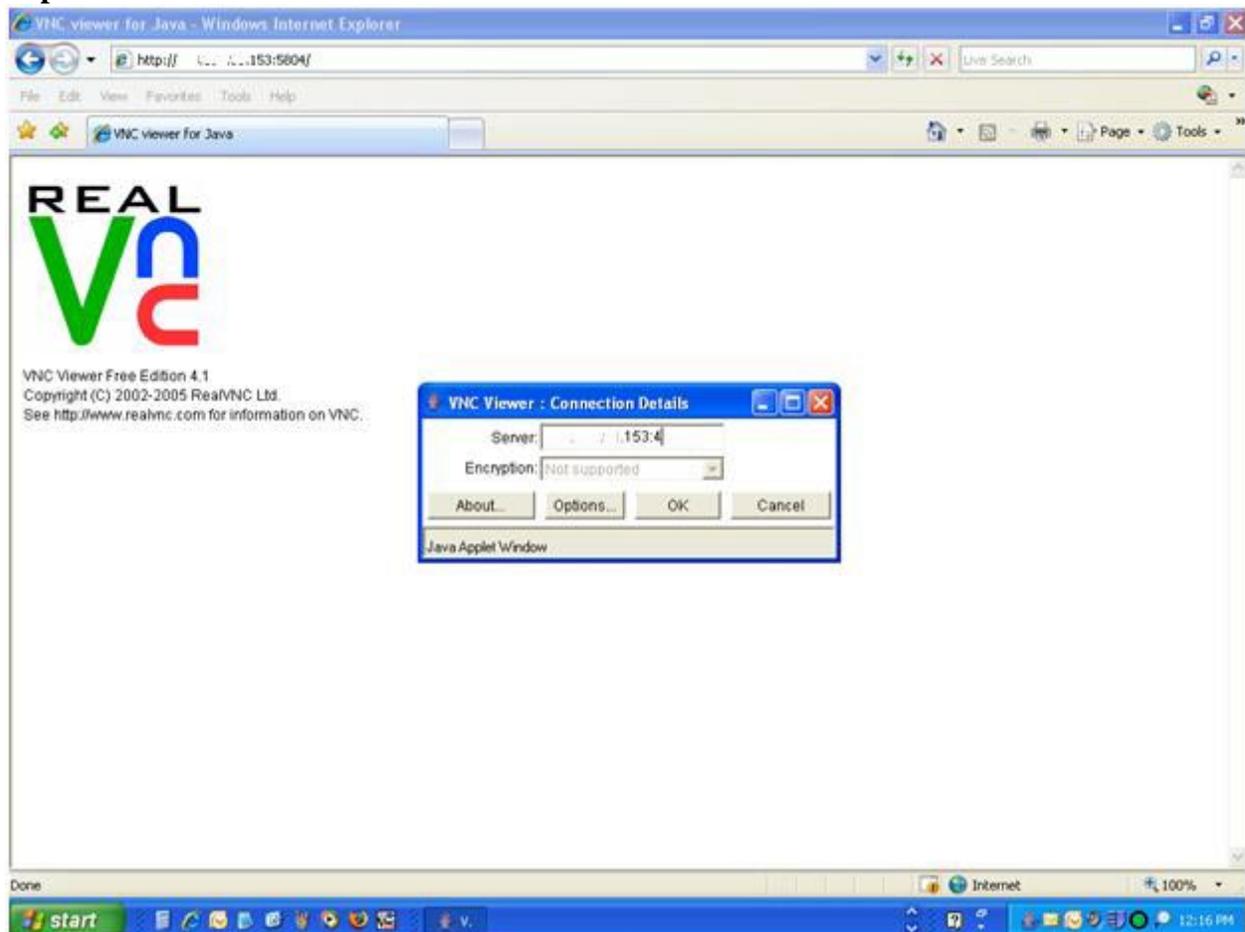
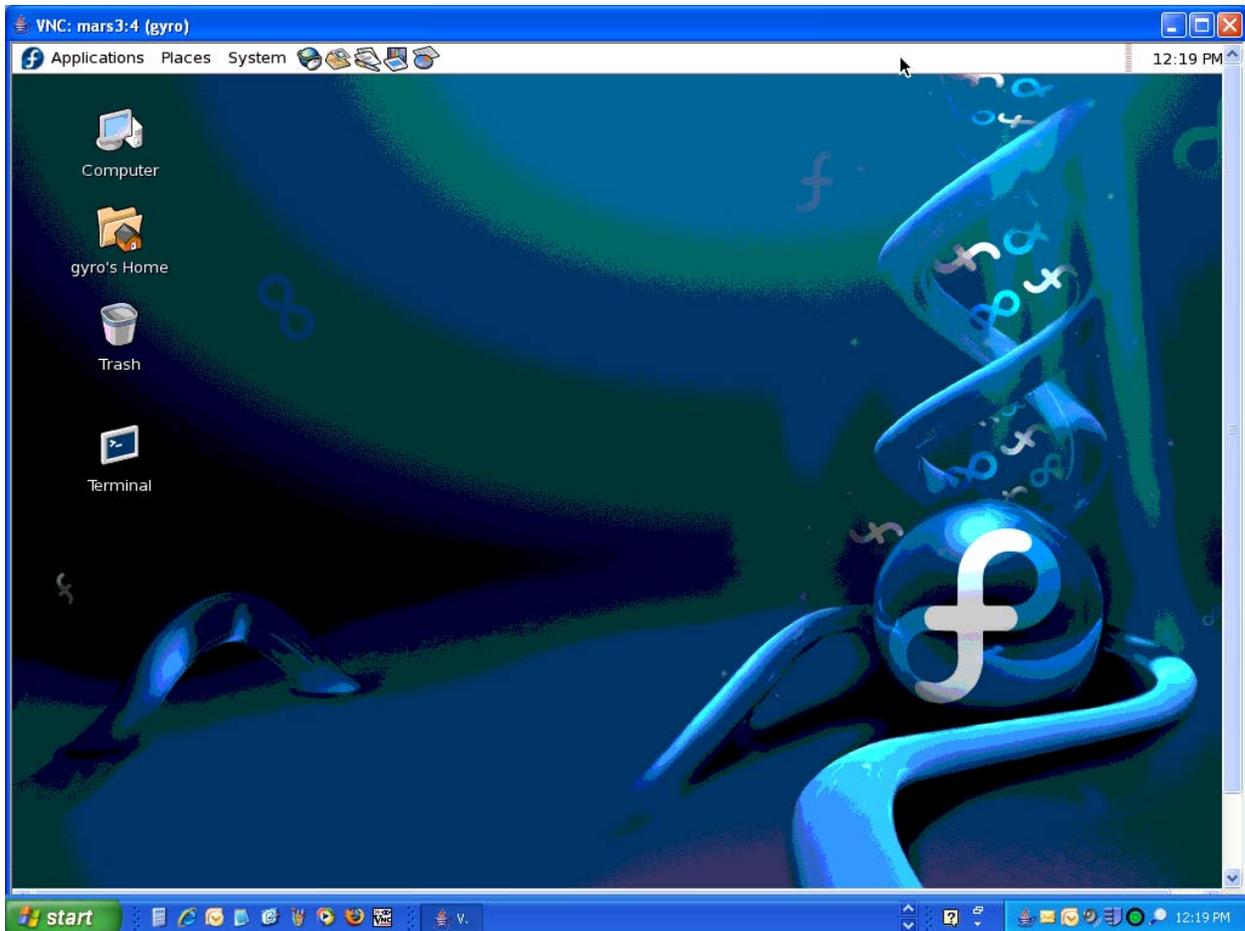


Figure 8 - Logging in with Internet Explorer

Click OK. Next, enter your VNC session password and hit ENTER. You have now accessed your session by using an Internet Browser. (See Figure 9)



*Figure 9 - Accessing a VNC Session with the Internet Explorer*

**Closing the GUI:** When you have finished checking on your project, you can close the GUI window. In order to close the GUI, simply click on the red "X" in the upper right corner of the screen in order to close the window. **DO NOT** log out or try to close the GUI in any other way - if you do, you risk causing problems with your session. (See Figure 10)

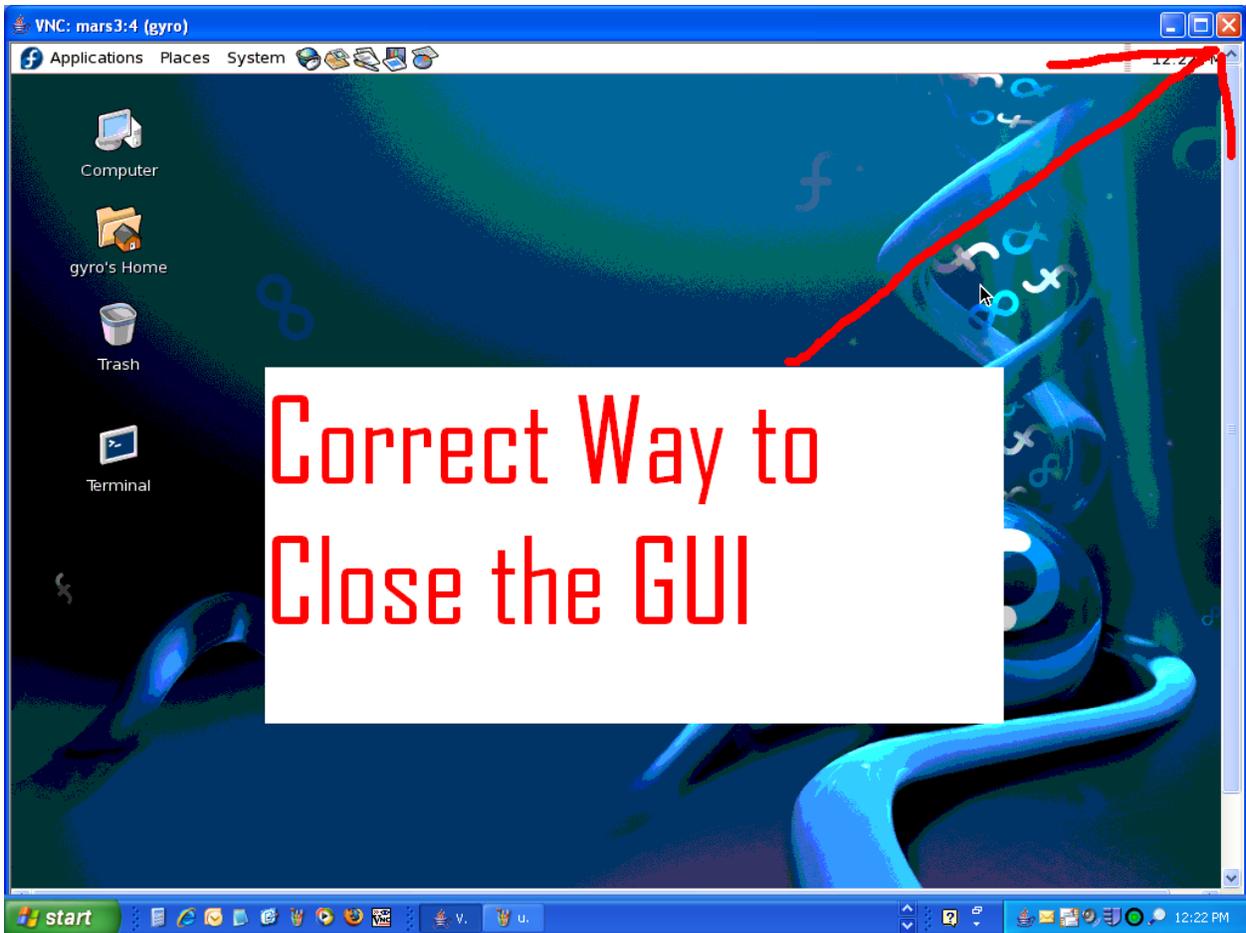


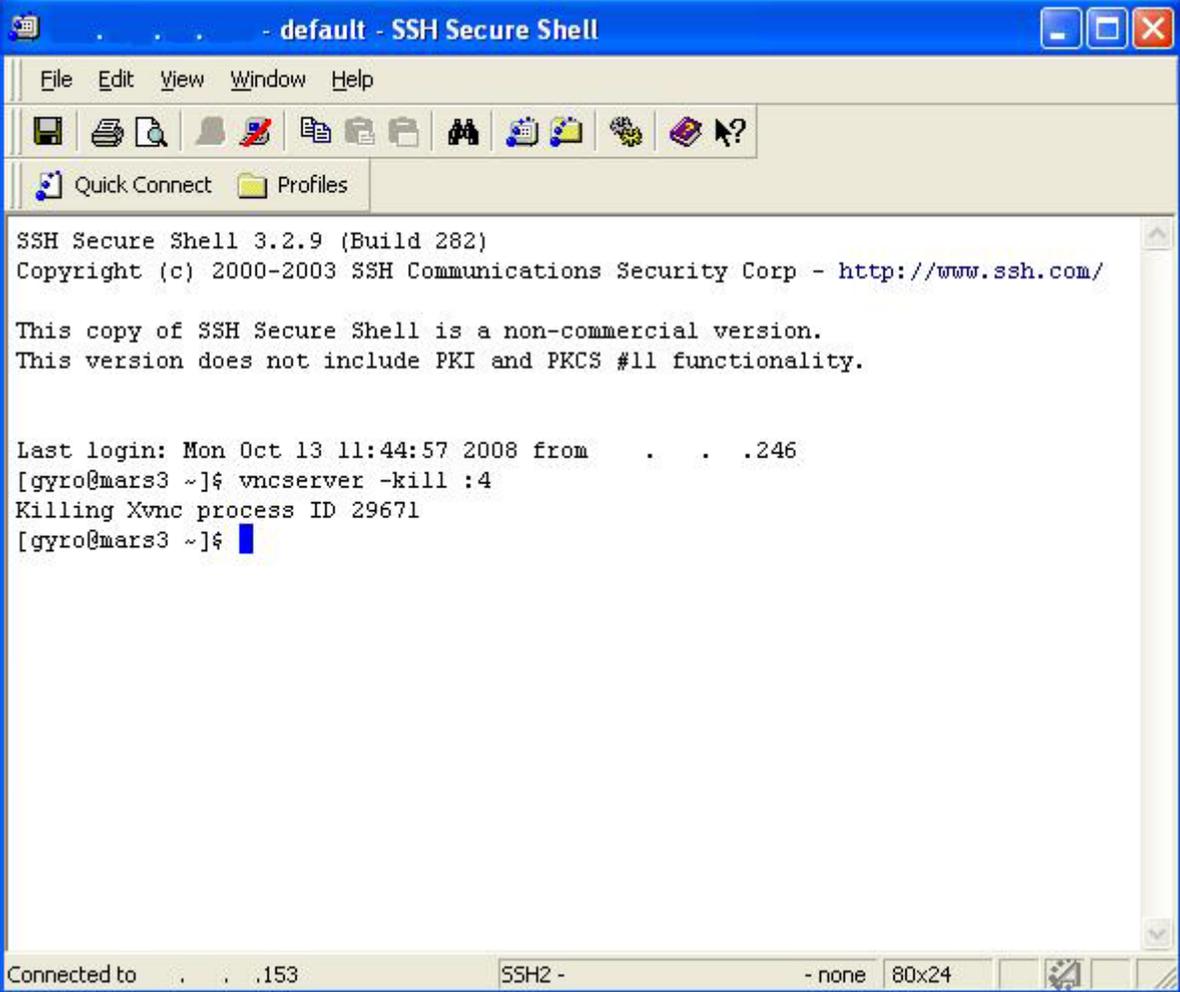
Figure 10 - Close Internet Explorer by clicking on the Red "X" as shown

Even though the GUI window has been closed, your VNC session is still running. This means that you can return to this project again in progress at any time using TightVNC and your session number. You may connect in this manner many times during the course of a project.

**Ending your VNC Session:** When your project is completely finished, you are *strongly encouraged* to end your VNC session. This frees up CPU time for other users and other projects. To end your session, log in using SSH and issue the following command:

**vncserver -kill :sessionnumber**

In this example, the session number is 4. See Figure 11 for an illustration of this example.



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Last login: Mon Oct 13 11:44:57 2008 from . . .246
[gyro@mars3 ~]$ vncserver -kill :4
Killing Xvnc process ID 29671
[gyro@mars3 ~]$
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*Figure 11 - Issuing the vncserver kill command*

Your vnc session is now concluded. A new session can be opened by you at any time.