



# Logging into GFDL via SSH and VNC

## Background

NOAA/GFDL allows registered users secure access to the site/resources via *SSH*. GFDL recommends and supports the *PuTTY* client-side tool for remote access through *daisy*, GFDL's *ssh* login host. Remember that *daisy* is only a gateway and provides no tools to do work on it. From *daisy*, the only thing users can do is connect to another host inside GFDL. Note that while *telnet* is still supported as a legacy service, *VNC* will not work unless *SSH* is used.

Once logged in to an internal linux workstation, a user can work from within the *SSH* terminal, or start up a VNC session to obtain a full-function *XWindow* environment. The directions below provide information on starting up and configuring VNC.

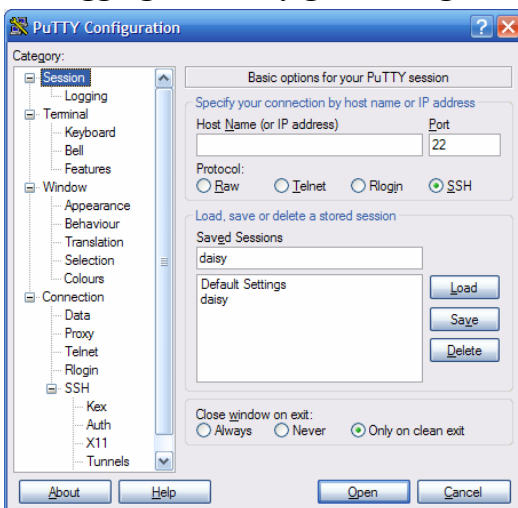
## QuickStart

For experienced *SSH* users, the steps are:

- *ssh* to *daisy.gfdl.noaa.gov*; your login name is your internal GFDL username; your password requires a CRYPTOCARD
- From there, follow the menu and log in to an internal linux workstation
- Once logged in, run the command *VNC* and follow the menu
- Note: In cases where a java enabled browser is available or does not work properly, it may be necessary to instead run the stand-alone tool *vncviewer*, which can be found at: <http://www.gfdl.noaa.gov/access/files>

## Detailed Instructions

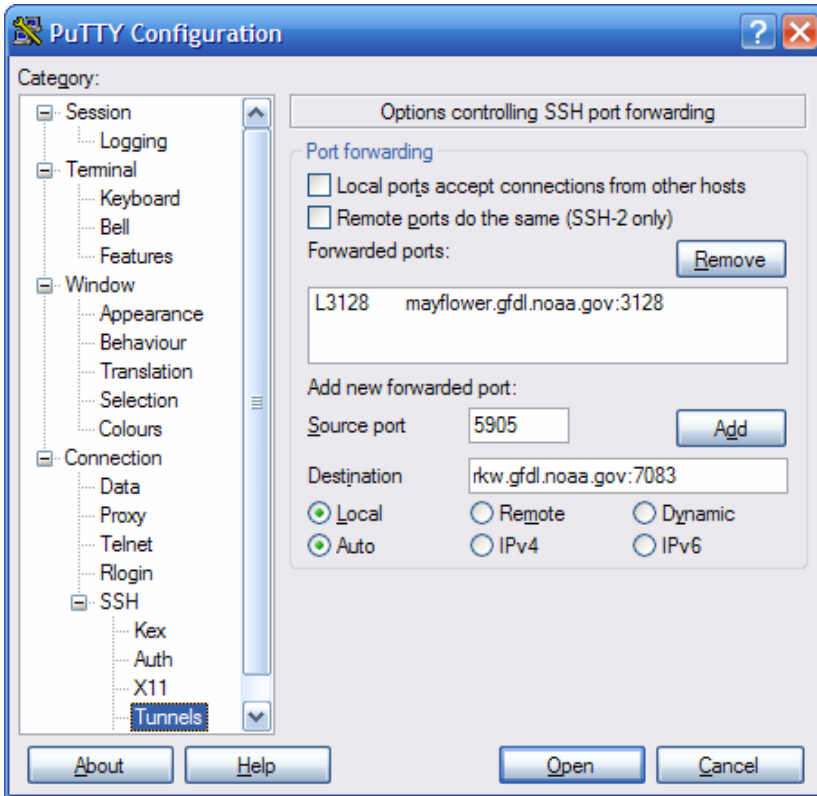
### 1. Logging into *daisy.gfdl.noaa.gov* using PuTTY:



- Start *PuTTY*
- You can find *PuTTY* under “Start”, “All Programs”
- Start up a *ssh* session to “daisy”, GFDL's *ssh* login host
- Log into an internal GFDL internal linux workstation
- If you do not have an assigned workstation, please use *public1.gfdl.noaa.gov*
  - Use this host as *<machine name>.gfdl.noaa.gov* in the configuration below

For more detailed instructions on how to access GFDL via *SSH*, see <http://www.gfdl.noaa.gov/access/documentation>.

## 2. Additional step to setup Port Forwarding for VNC



Re-Open PuTTY and load the daisy configuration. Then go to the Tunnels Category as shown to the left.

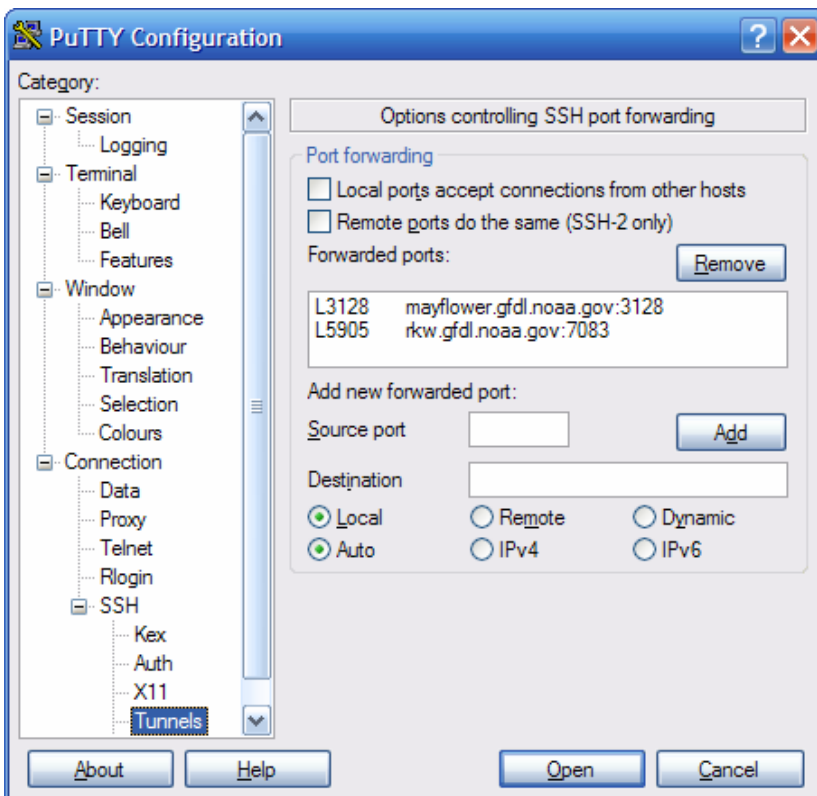
*Determine the SSH port forward (tunnel) that needs to be established for VNC.*

- In the open ssh terminal to the an internal GFDL linux workstation, run the following command:

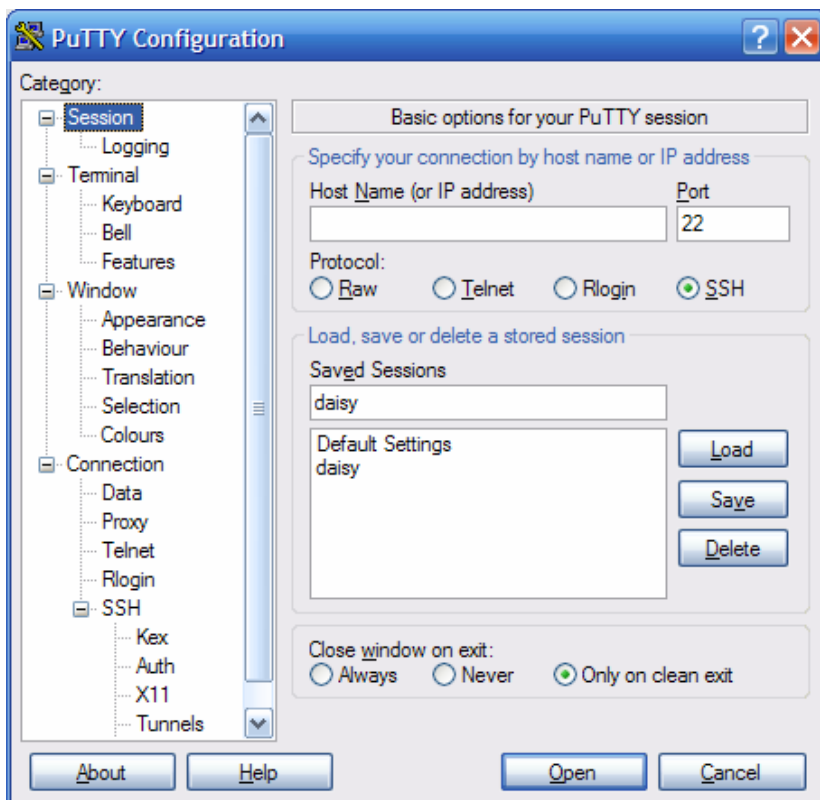
```
echo "`id -u` + 5900" | bc
```

This will return a 4 to 5 digit **number**.

- In the “Add new forwarded port:” enter “**5905**” as the “Source port” and “<machine name>.gfdl.noaa.gov:**number**” as the “Destination”.
- Click the “Add” button.



- The Tunnels screen should now look similar to the image to the left.
- Note: 7083 is specific for the example user rkw. Your port number will be different.



- Return to the “Sessions” Category.
- Enter “daisy” into the “Saved Sessions” box.
- **Click the “Save” button on the right.**

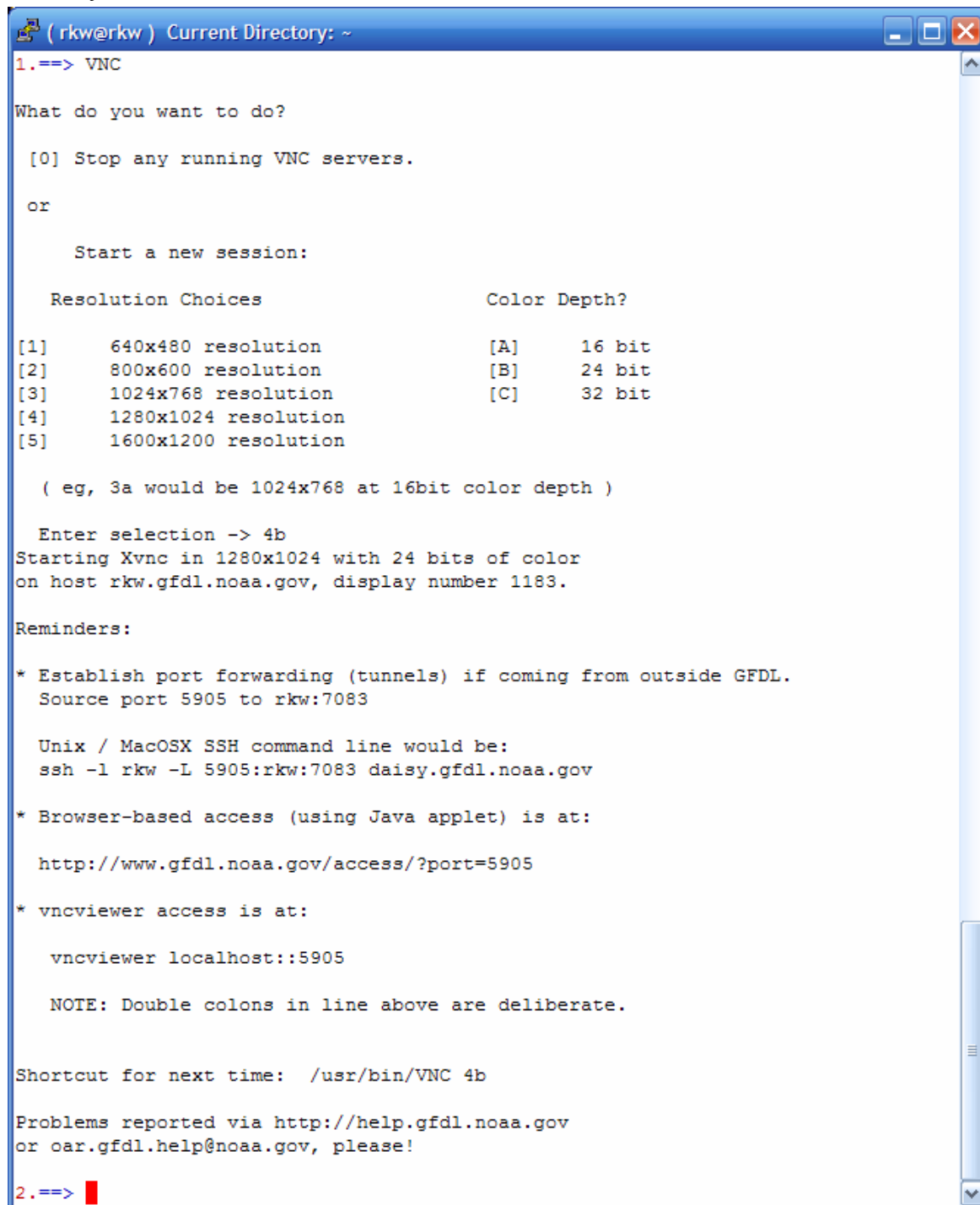
- In the future click on “daisy” in the “Saved Sessions” list to open the connection.
- You can now close your original ssh session. Please open a new ssh session using your updated (with the VNC port forward) daisy configuration.

**REMEMBER:**

- Daisy is only a gateway. Daisy does not give you any tools to do work on it. From Daisy you can only SSH to another host inside GFDL.
- From daisy you can ssh to an internal linux workstation (such as public1). You then can work within your PuTTY window or start VNC.

### 3. Running VNC:

- Log into the internal GFDL linux workstation that you are going to run VNC on. After you login as yourself, enter the command “VNC” and follow the instructions.



```
(rkw@rkw) Current Directory: ~
1.==> VNC

What do you want to do?

 [0] Stop any running VNC servers.

or

  Start a new session:

Resolution Choices                                Color Depth?
[1]    640x480 resolution                          [A]    16 bit
[2]    800x600 resolution                          [B]    24 bit
[3]    1024x768 resolution                         [C]    32 bit
[4]    1280x1024 resolution
[5]    1600x1200 resolution

( eg, 3a would be 1024x768 at 16bit color depth )

Enter selection -> 4b
Starting Xvnc in 1280x1024 with 24 bits of color
on host rkw.gfdl.noaa.gov, display number 1183.

Reminders:

* Establish port forwarding (tunnels) if coming from outside GFDL.
  Source port 5905 to rkw:7083

  Unix / MacOSX SSH command line would be:
  ssh -l rkw -L 5905:rkw:7083 daisy.gfdl.noaa.gov

* Browser-based access (using Java applet) is at:

  http://www.gfdl.noaa.gov/access/?port=5905

* vncviewer access is at:

  vncviewer localhost::5905

  NOTE: Double colons in line above are deliberate.

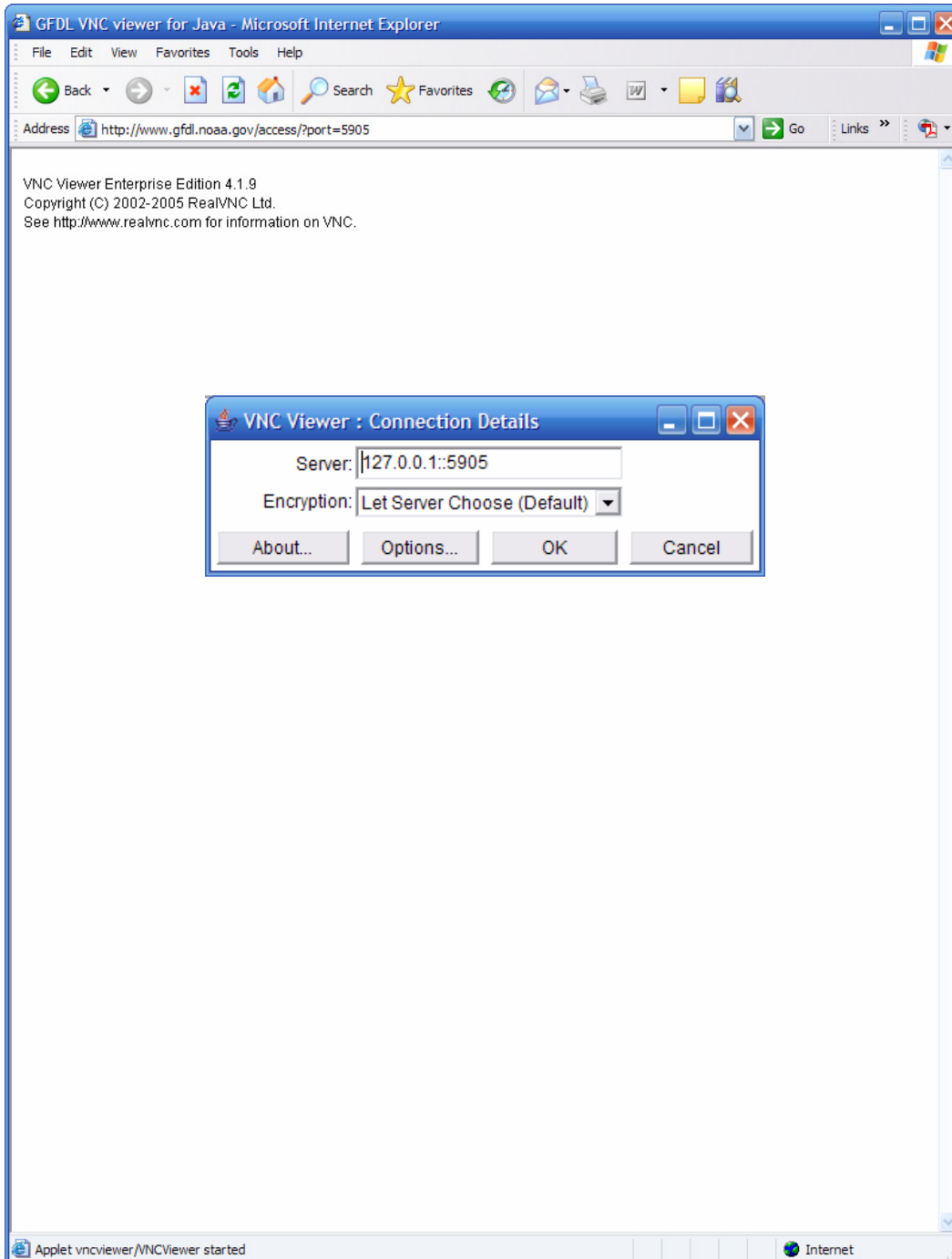
Shortcut for next time: /usr/bin/VNC 4b

Problems reported via http://help.gfdl.noaa.gov
or oar.gfdl.help@noaa.gov, please!

2.==> █
```

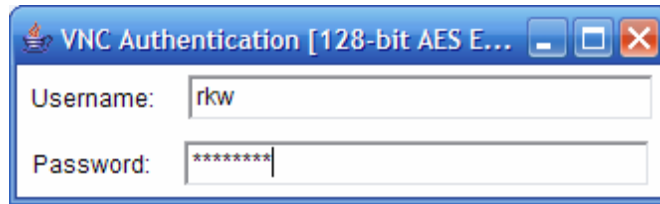
- Now enter the webpage given in a web browser or startup the *vncviewer.exe* and login.
  - The *vncviewer* executable can be found at the download link at the beginning of this document.
  - *vncviewer* is slightly faster than the browser based version and can support a better color palette (also known as color depth).

- The web browser version can be open from any web browser requires no additional download to your remote machine.
  - There have been reports with an older version of Microsoft Internet Explorer not supporting the correct Java. In that instance, please patch the remote machine, use a different browser, or use the *vncviewer*.
- The browser based VNC Viewer will look like:



- After you start VNC from your workstation you can enter the web browser and enter the web address "http://www.gfdl.noaa.gov/access/?port=5905" and you will see the above window.

- Click the “OK” button. And an authentication box will appear:

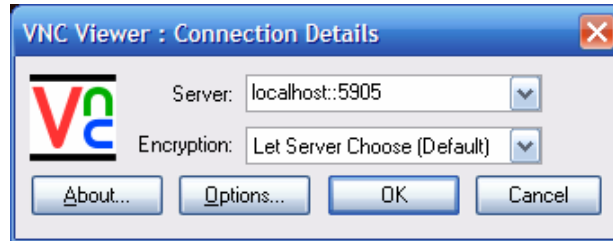


- Now you can enter your GFDL username and password.
- Your VNC session will now start:

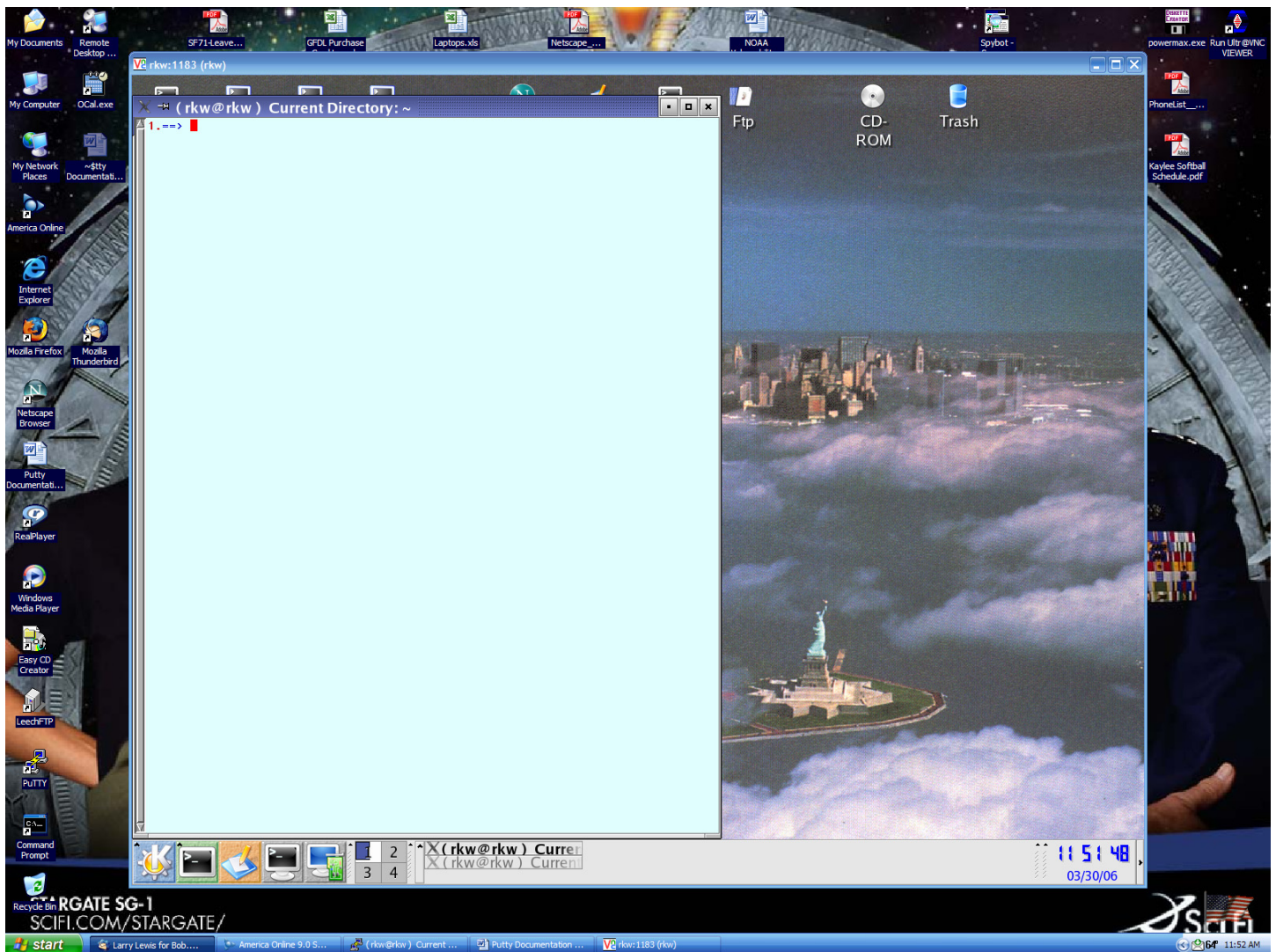
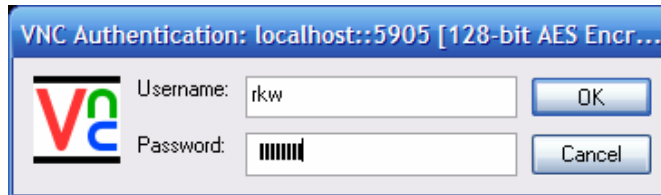


- You are now logged into a GFDL linux workstation using VNC. This method currently only supports 16 bit color (256 colors).

- If you use the vncviewer you will get the following window:



- You will need to enter “localhost::5905”.
- You will then need to login using your GFDL username and password.

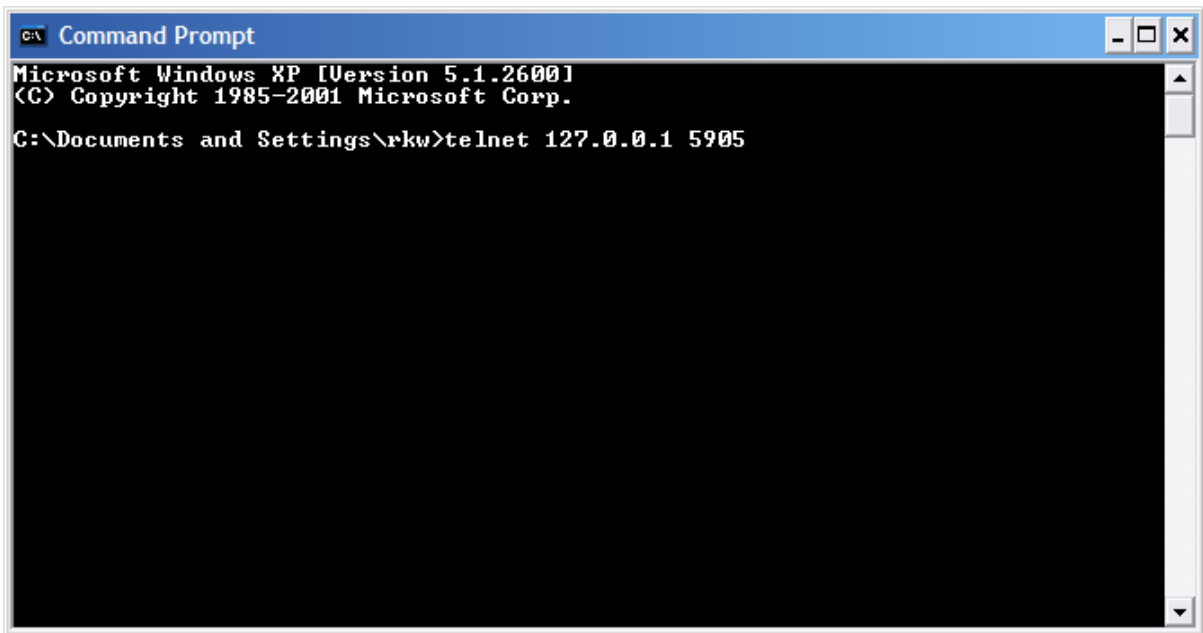
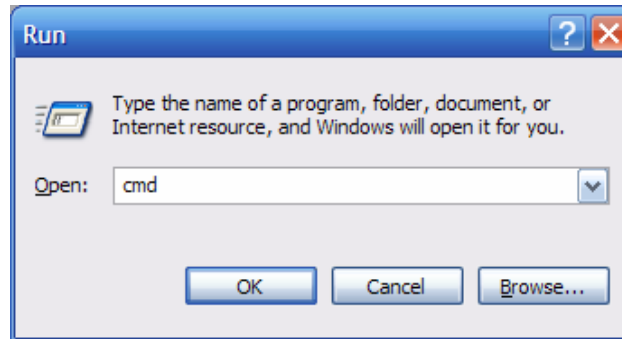


- You are now logged into a GFDL linux workstation using VNC.

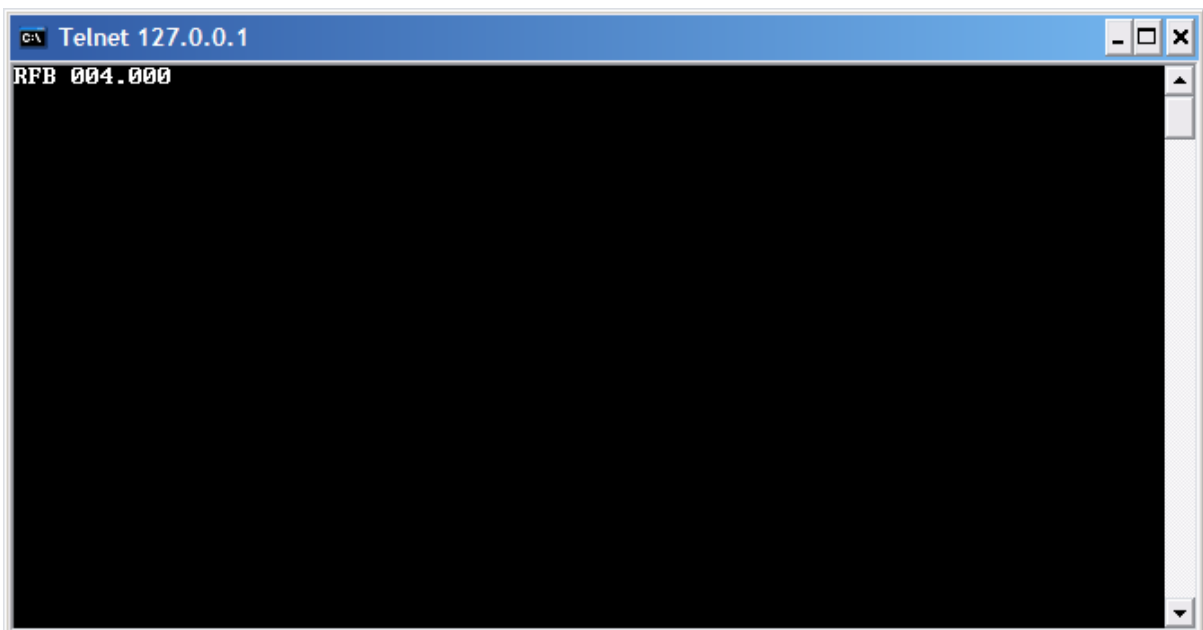
#### 4. What to do if it doesn't work:

- Verify the tunnel is working:

Start → Run →

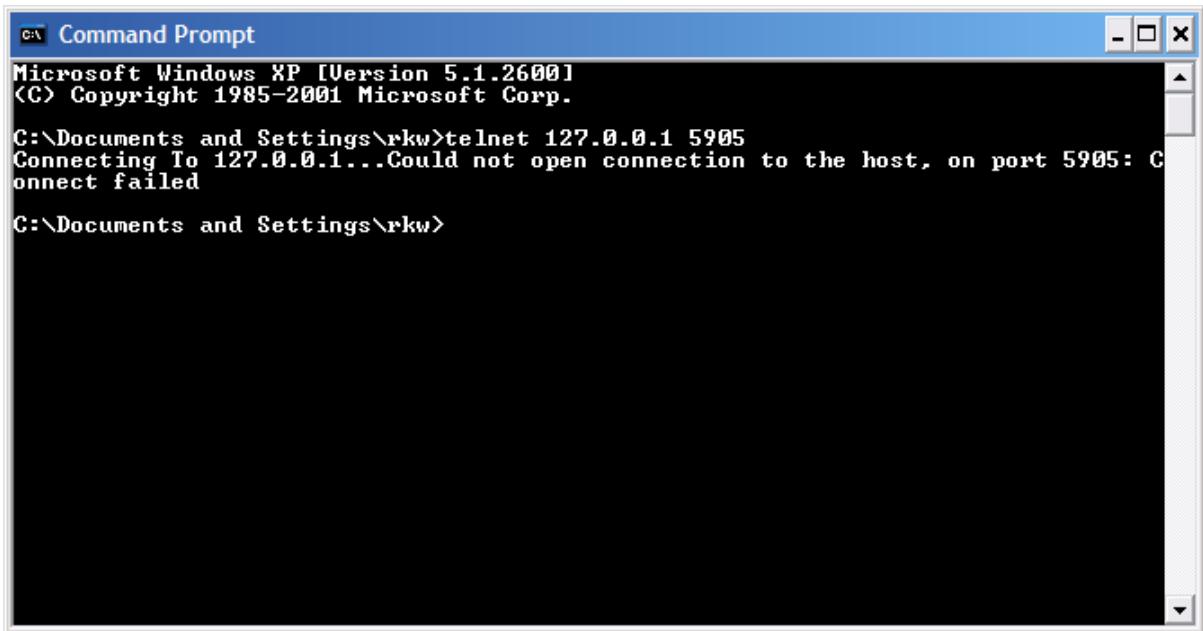


- If you see this window the tunnel is working correctly.





- If you see this window the tunnel is **not** working correctly.



- If you tunnel is working correctly and produces the output on the previous page but you still cannot get your browser to connect correctly, you should try the non-Java VNC viewer, which can be found at: <http://www.gfdl.noaa.gov/access/files>, as often there are browser-specific problems with the Java viewer. In particular, IE 6.0.2800.1106.xpsp2.050301-1526 is known to have problems.
- Contact the GFDL Help Desk if there are any additional questions/problems at [oar.gfdl.help@noaa.gov](mailto:oar.gfdl.help@noaa.gov)