



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 *ssh.gfdl.noaa.gov*, GFDL's *ssh* login host. Remember that *ssh.gfdl.noaa.gov* is only a gateway and provides no tools to do work on it. From "*ssh*", 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 `Firstname.Lastname@ssh.gfdl.noaa.gov`; (your login name is your Firstname.Lastname); your passcode requires your "PIN" and RSA fob number.
- 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

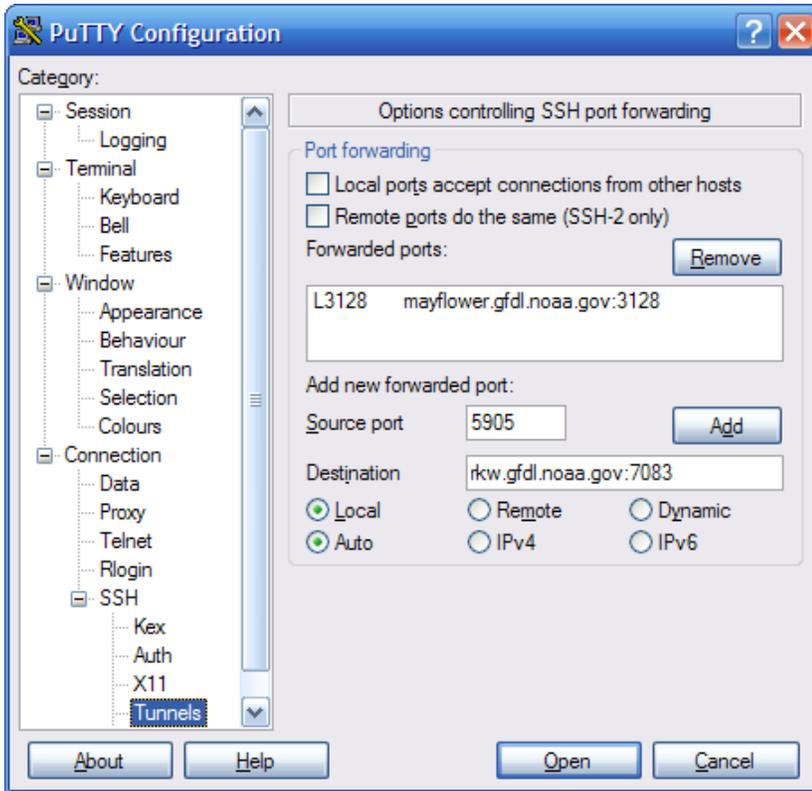
1. Logging into *ssh.gfdl.noaa.gov* using *PuTTY*:



- Start *PuTTY*
- You can find *PuTTY* under "Start", "All Programs"
- Start up a *ssh* session to "*ssh.gfdl.noaa.gov*", 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 ssh.gfdl.noaa.gov configuration. Then go to the Tunnels Category as shown to the left.

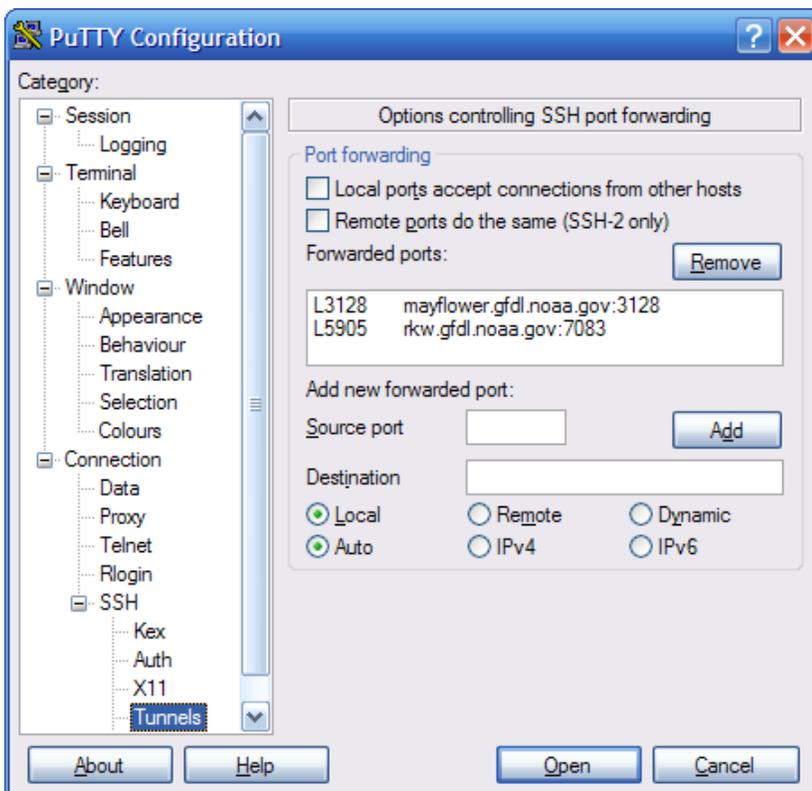
Determine the SSH port forward (tunnel) that needs to be established for VNC.

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

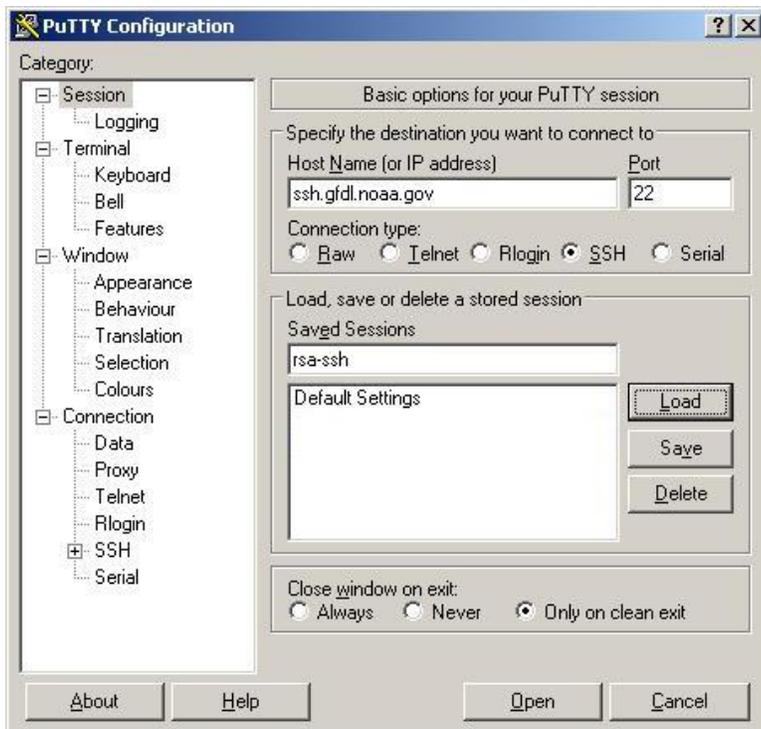
```
echo "`id -u` + 5900" | bc
```

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 “rsa-ssh” into the “Saved Sessions” box.
- **Click the “Save” button on the right.**

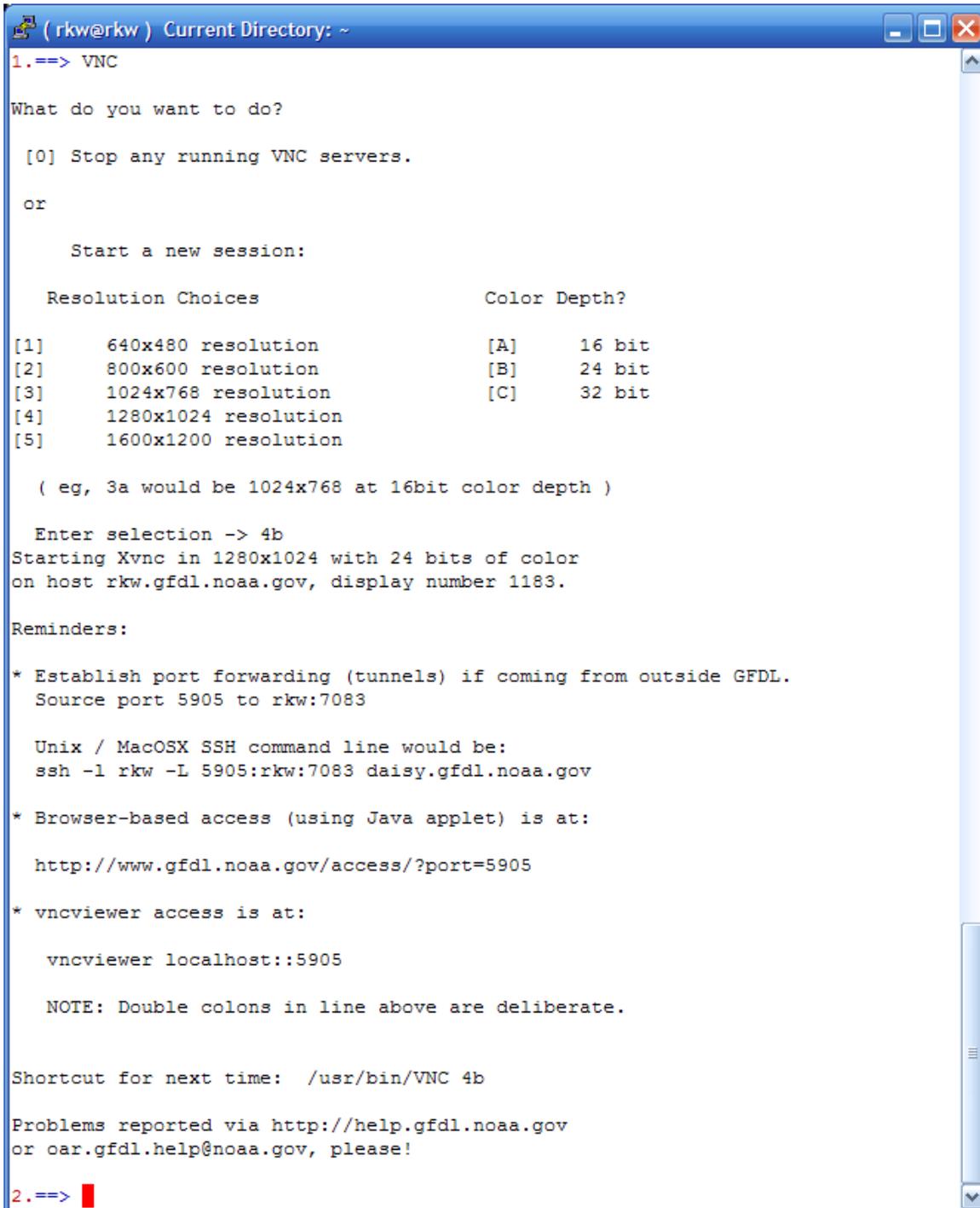
- In the future click on “rsa-ssh” in the “Saved Sessions” list to open the connection.
- You can now close your original ssh session. Please open a new ssh session using your updated (with the VNC port forward) ssh.gfdl.noaa.gov configuration.

REMEMBER:

- ssh.gfdl.noaa.gov is only a gateway. ssh.gfdl.noaa.gov does not give you any tools to do work on it. From ssh.gfdl.noaa.gov you can only SSH to another host inside GFDL.
- From ssh.gfdl.noaa.gov 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.

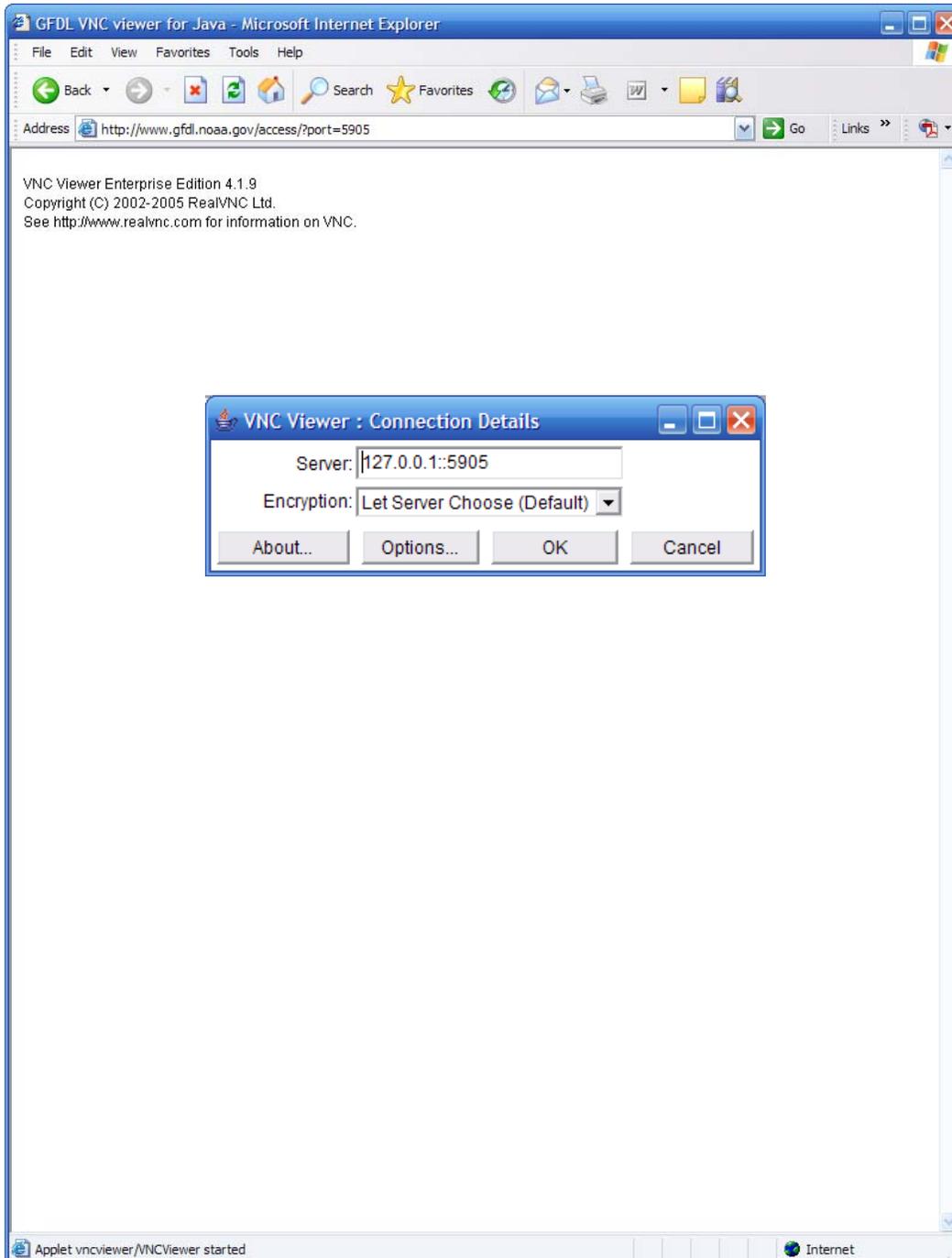
Shortcut for next time: /usr/bin/VNC 4b

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

2.==> █
```

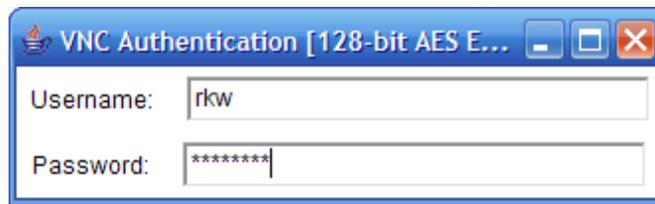
- Now enter the webpage given in a web browser or startup the *vncviewer.exe* and login.
 - The *vncviewer* executable can be found at the download link at the beginning of this document.
 - *vncviewer* is slightly faster than the browser based version and can support a better color palette (also known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

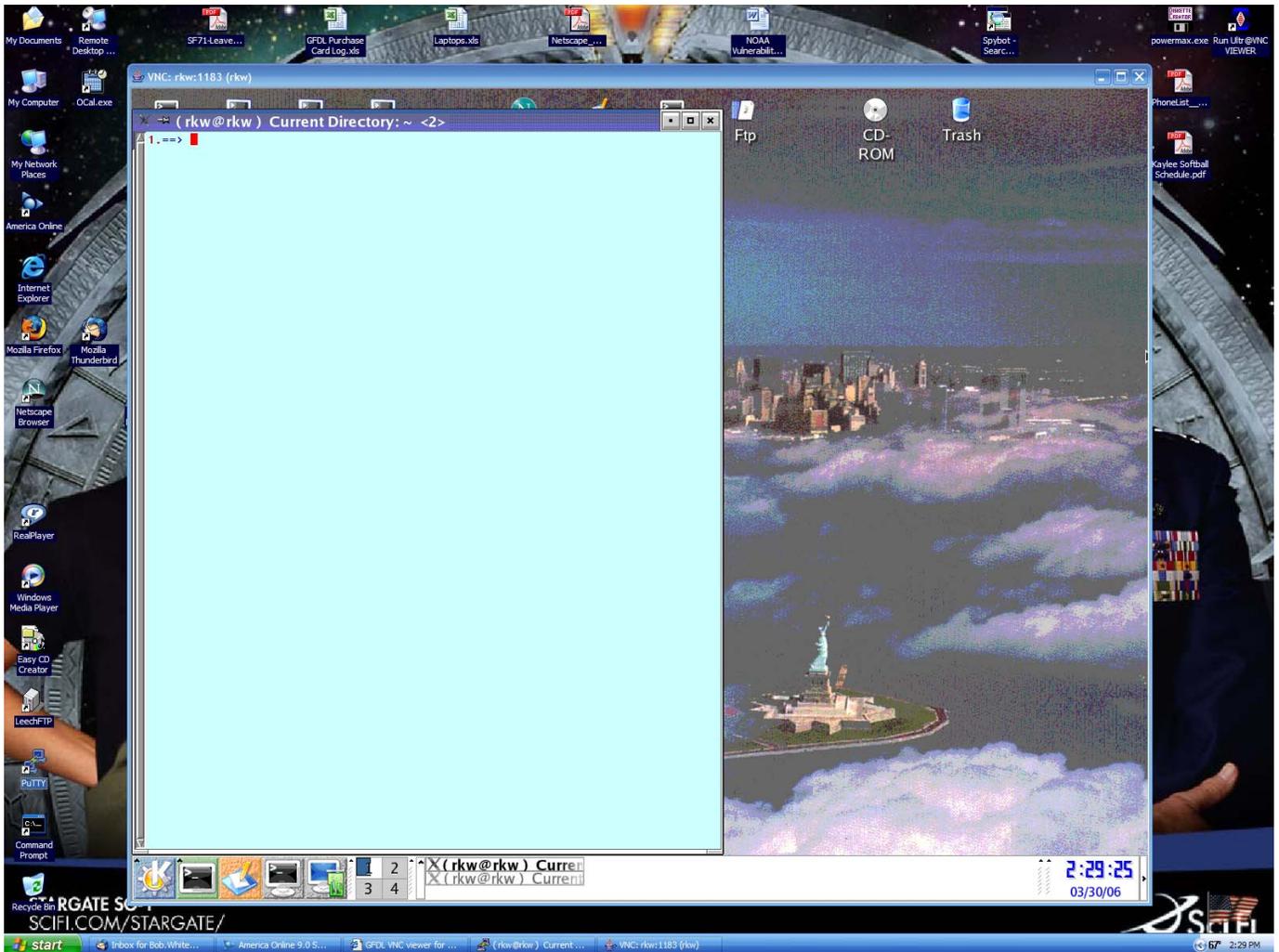


- After you start VNC from your workstation you can enter the web browser and enter the web address “<http://www.gfdl.noaa.gov/access/?port=5905>” and you will see the above window.

- 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:

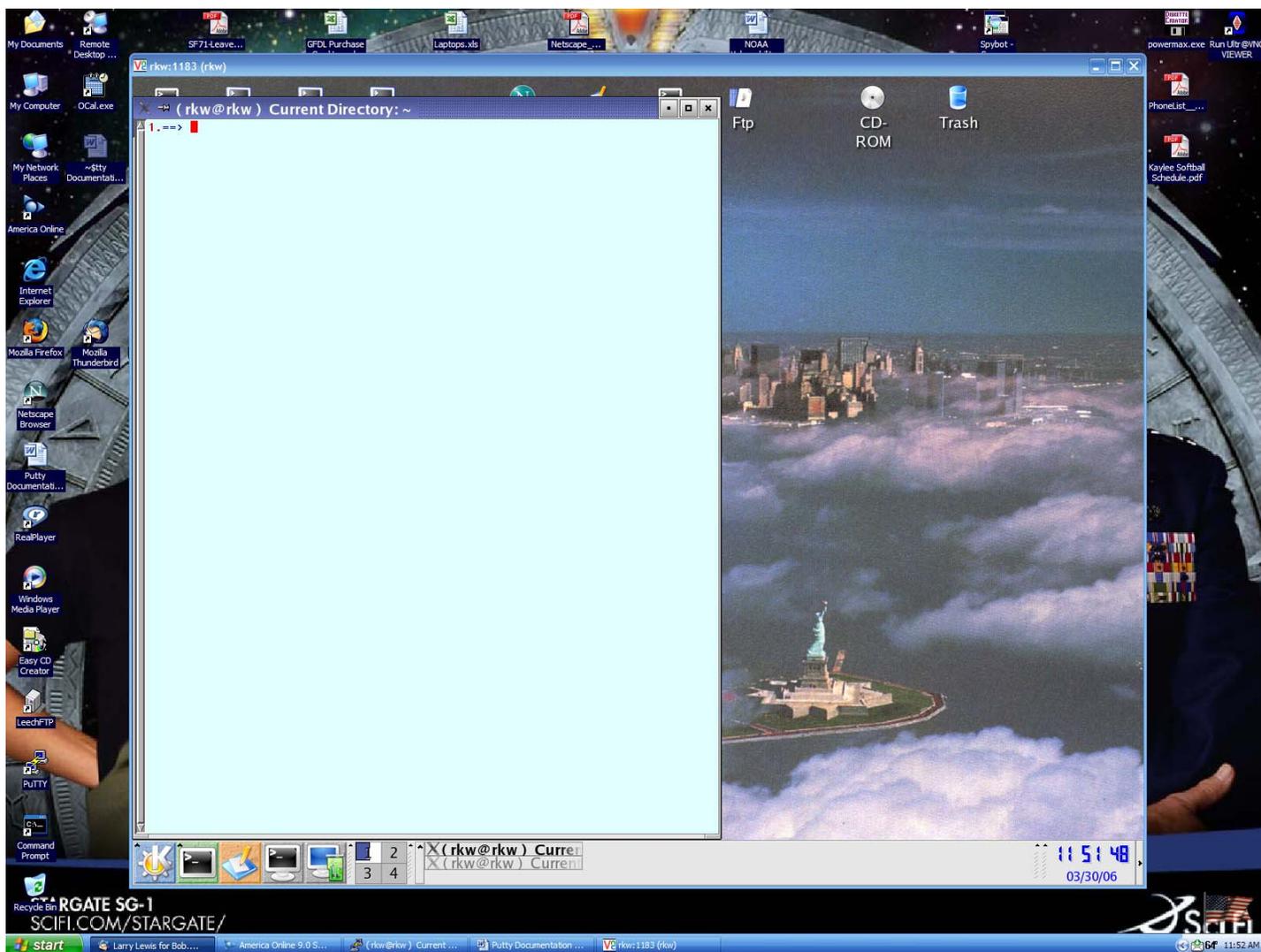
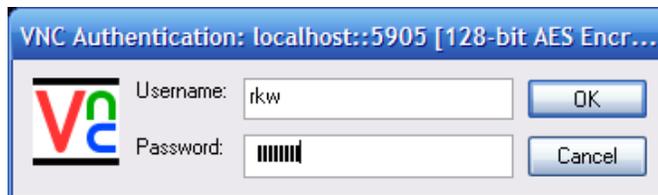


- You are now logged into a GFDL linux workstation using VNC. This method currently only supports 16 bit color (256 colors).

- 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.

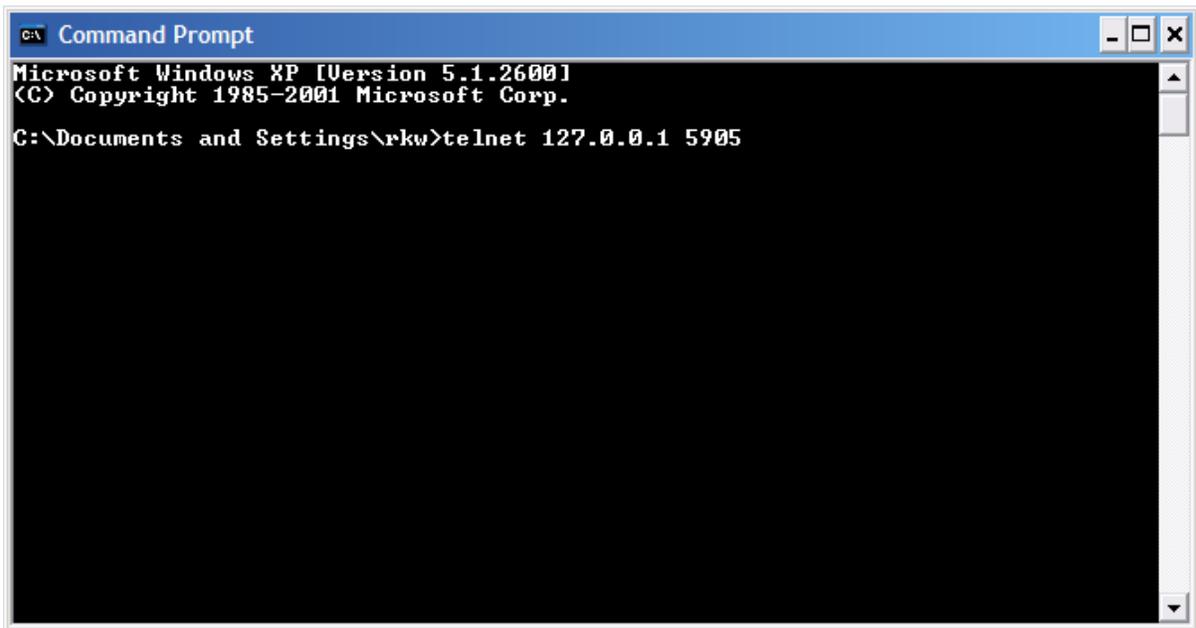
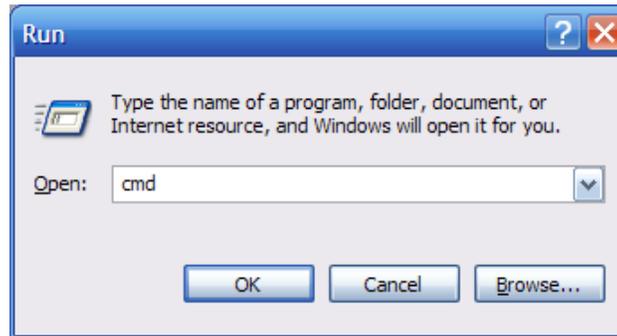


- You are now logged into a GFDL linux workstation using VNC.

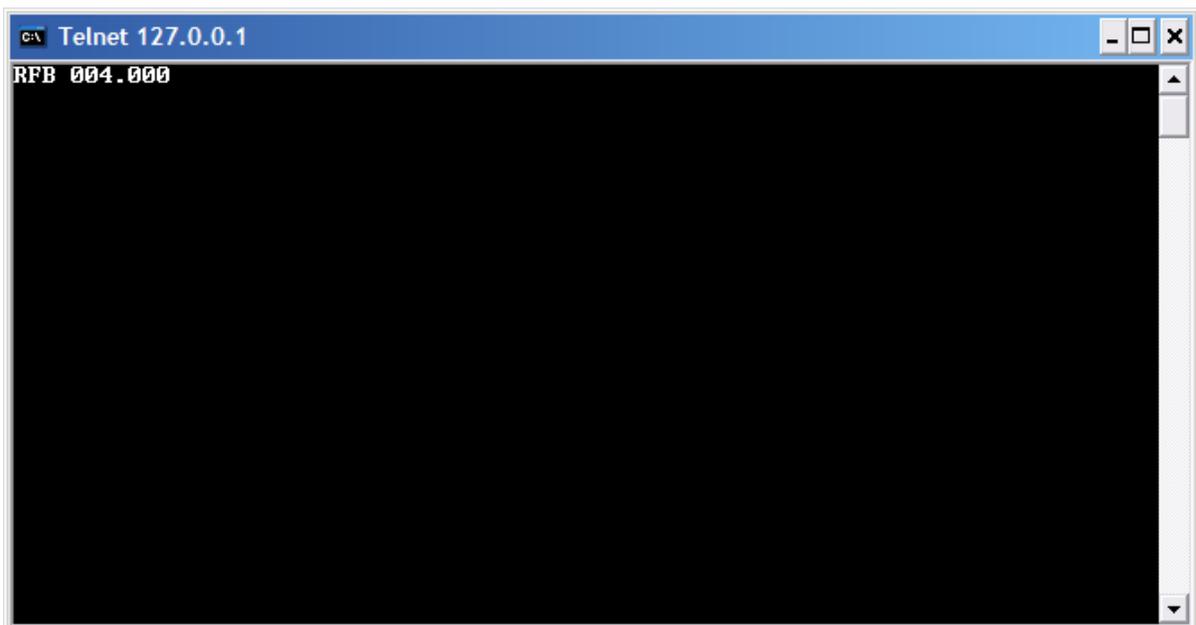
4. What to do if it doesn't work:

- Verify the tunnel is working:

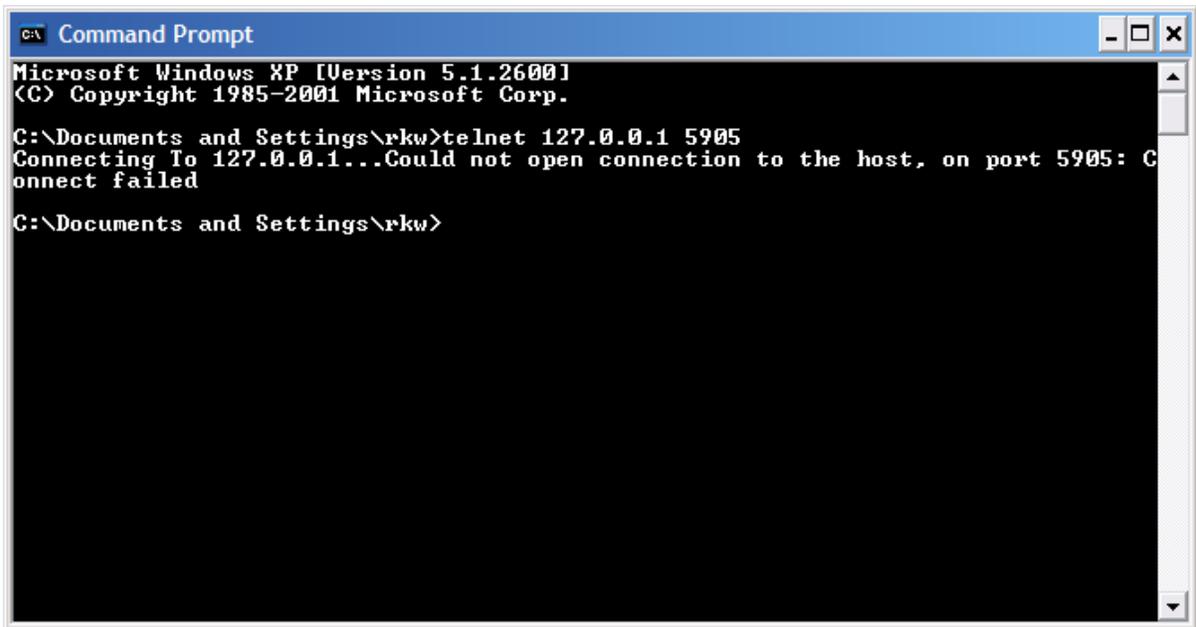
Start → Run →



- 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