

# RDAV Tutorial: Connecting to Nautilus for Hands-on Work

<http://rdav.nics.tennessee.edu/>

If you want to work hands-on, you will need to register a password token. For work with R or Kepler, you will need either X-windows (built in on Linux and Mac) or a VNC client, a shell (Terminal on Mac, PuTTY on Windows). To use VisIt, you will need to have the VisIt software installed on your computer.

1. In your web browser, go to the web address written on the letter that came with your password token `https://portal.nics.tennessee.edu/class/###/student`
2. Enter your name, email address, username, and citizenship. **The username is written on the outside of the envelope that the token came in.**
3. We can use Nautilus for the next step in setting up the token:
  - (a) `ssh std00##@nautilus.nics.utk.edu` (For `std00##` use your username from the envelope.)
  - (b) Enter the number showing on the password token.
  - (c) You should get a prompt asking if you want to set a PIN. Yes, you want to set a PIN.
  - (d) Follow the directions for setting the PIN. Choose something that you will remember for today.
  - (e) **Important:** From now on, when Nautilus asks for your **PASSCODE**, you will enter your PIN followed by the number showing on the password token.
  - (f) Type: `pwd`

This is the path to your home directory. It should be in the form: `/nics/[letter]/home/std00##` .  
You will need to include it in some of the exercises involving workflows.

4. If you are using Linux or Mac, you can use ssh with X-forwarding:

```
ssh -Y username@login.nautilus.nics.utk.edu
```

Use your username from the envelope. Nautilus will prompt you for your **PASSCODE**. This is the PIN that you chose followed by the number showing on the password token.

Windows users will either need an X-client or else to use VNC. If you are using VNC with Windows with PuTTY, here is how to connect. A screenshot of how to set up the SSH tunnel is on the next page.

- (a) From the prompt on Nautilus, give the command: `vncpasswd`

It will prompt you for a password. Choose something that you will remember for today but that is *not a valuable password*. You'll be using this password again in just a few minutes.

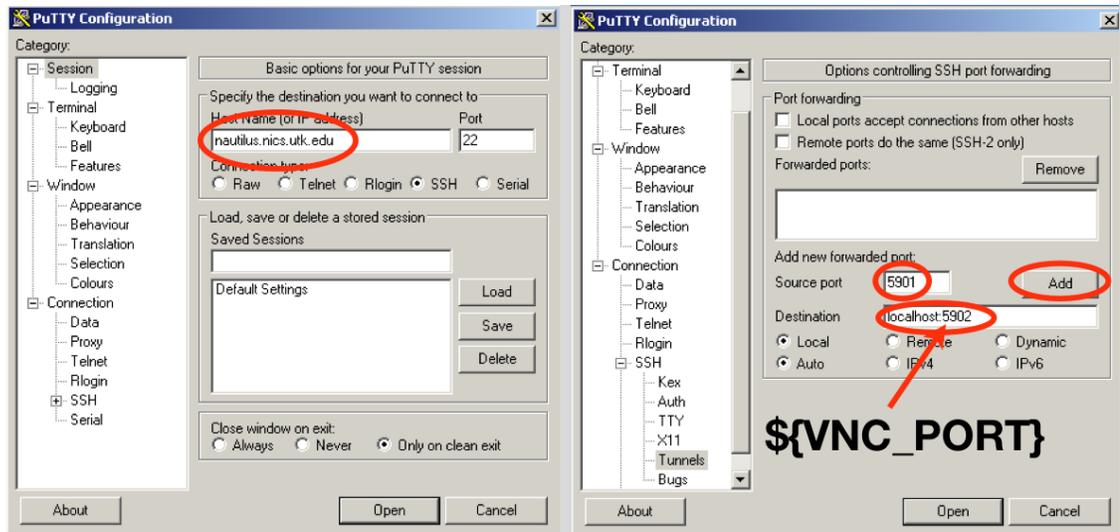
- (b) From the prompt on Nautilus, give the command: `rdav-vnc-startup`

Take note of the **DISPLAY\_NUM** because you will need to it shut everything down gracefully at the end of this session. You will also be provided with a command that looks roughly like:

```
ssh -C -l username -L 5901:localhost:5916 -N nautilus.nics.utk.edu
```

The next steps explain how to put this information into PuTTY.

- (c) In PuTTY fill in `nautilus.nics.utk.edu` as the Host name.
- (d) Go to the **SSH** → **Tunnels** section. The **Source port** is 5901 and the **Destination port** is `localhost:59##`, where the number is the one that you were given by Nautilus. Be sure to click **Add**.



- (e) Click **Open**. Enter your *PASSCODE* (PIN + number showing on the token).
- (f) In your VNC viewer, connect to **localhost:5901**. (Some software wants this in the form **localhost::5901**.) When you are asked for a password, enter the VNC password that you created just a few minutes ago.
5. If you are using Windows and a VNC session, at the end of the activity you need to close everything down in the correct order.
- Close all programs running in your VNC session on Nautilus.
  - Close the VNC connection or quit your VNC viewer.
  - Close the SSH tunnel that was opened by PuTTY (the second connection that you created with PuTTY).
  - In the first connection to Nautilus that you made with PuTTY give the command:
 

```
vnserver -kill :DISPLAY_NUMBER
```

 where *DISPLAY\_NUMBER* is the number that you were given by Nautilus when you opened the session.
  - Close the SSH connection to Nautilus.