

# Tutorial – Linux

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# Goal

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- Learn how to use Linux

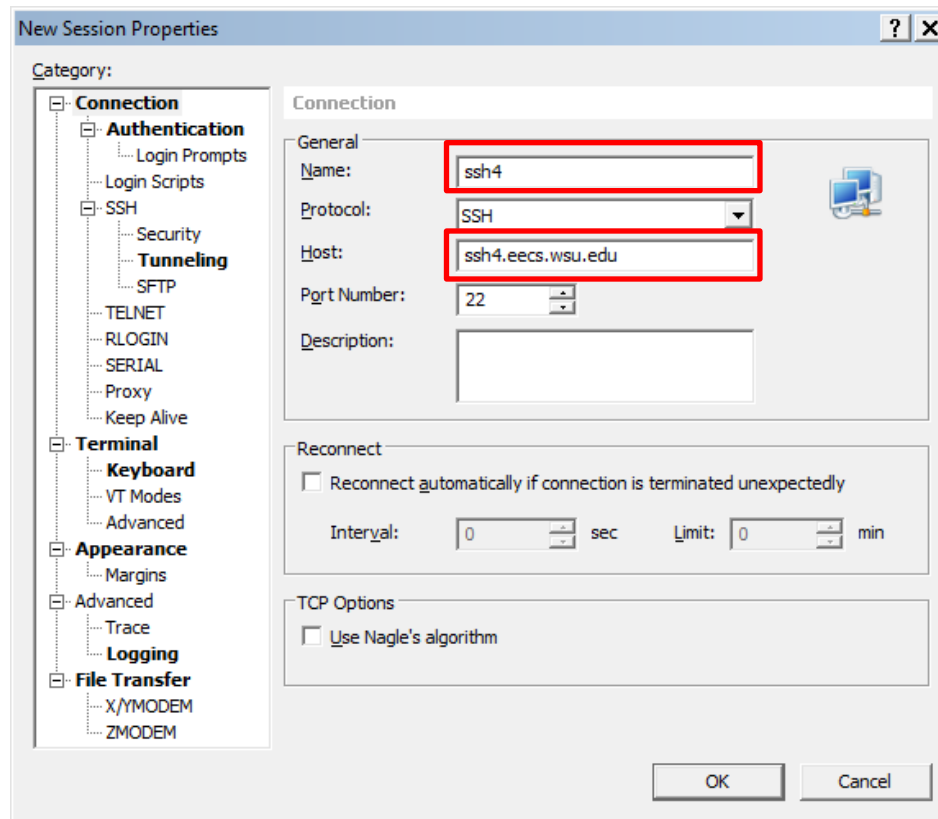
# For Windows Users

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- Download an SSH client program such as
  - PuTTY
  - NetSarang Xshell
    - This is what I am using. It is free.
  - SecureCRT
  - ...
- Download an X server software such as
  - Xming
    - This is what I am using. It is free.
    - This is used only for GUI environments.

# Xshell

- Create a session.
- In the “Sessions” window, click “New”.
  - Enter a name for the session and a host (server) address.



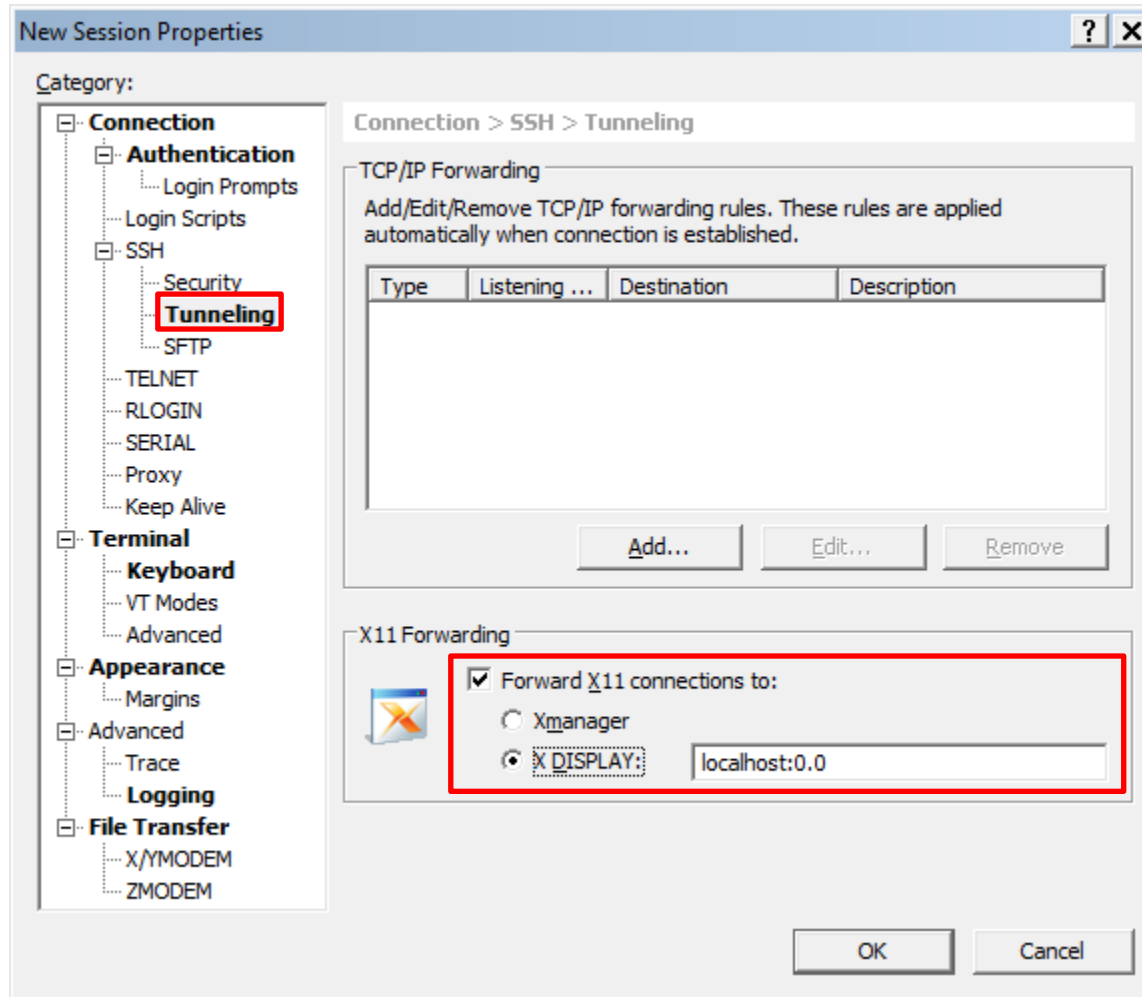
# Xshell

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- Hosts
  - You can try the following servers.
  - ssh1.eecs.wsu.edu
  - ssh2.eecs.wsu.edu
  - ssh3.eecs.wsu.edu
  - ssh4.eecs.wsu.edu

# For Windows Users

- Click “Tunneling” and turn on the “X11 Forwarding” option.



# For Windows Users

- Click ok to save the session. From the next time, you can just double-click this session to connect to the server.
- Double-click the session.
  - If you are asked some questions, click “Accept and Save.”
  - Then, enter your EECS ID and password.

```
System Load: 0.02, 0.08, 0.08
System Uptime: 91 days 6 hours 28 min 29 sec
Memory Usage: 63.2%          Swap Usage: 21.3%
Local Users: 10              Whoami: daehyun
Processes: 444

Interface      MAC Address      IP Address
eth0           00:50:56:97:14:8d 69.166.49.161/23

Other ssh hosts available for your use:

ssh -X ssh100

https://support.vcea.wsu.edu/kb/a31/?KBSearchID=55
```

# For Windows Users

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- Run Xming if you also want to use GUI.
  - If you plan to work in text mode only, you don't need to run Xming.
  - Later on, you will need to run some GUI-based software, so it's better to just run Xming.
- Now, you are ready to work in Linux.



# For Linux Users

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- Open a terminal.
- Run
  - `ssh -X your_EECS_id@ssh1.eecs.wsu.edu`
  - (ssh1 ~ ssh4 are available)
  - All the commands are case-sensitive. Use `-X` instead of `-x`.
- If you are asked a question, just enter “yes”.
- Enter your EECS account password.
- Now, you are ready to work in the server.

# For Mac Users

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- For text-mode operations
  - Open a terminal.
    - Click “Launchpad” and type “terminal”.
    - Click the terminal icon.
  - Run
    - `ssh -X your_EECS_id@ssh1.eecs.wsu.edu`
  - Follow the instructions for Linux users in the previous page.
- For GUI operations
  - You will need to install an X-client software such as
    - XQuartz
      - I use this.
  - Then, click XQuartz, “Applications”, and “Terminal.”
  - It will open a terminal supporting X window.
  - Run
    - `ssh -X your_EECS_id@ssh1.eecs.wsu.edu`
  - Follow the instructions for Linux users in the previous page.

# Linux Commands

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- Create a directory (folder).
  - `mkdir directory_name`
  - ex: `mkdir ee466`
- Go to the directory (`cd`: change directory).
  - `cd directory_name`
  - ex: `cd ee466`
- List all the files in the current directory.
  - `ls -al`
- Zip files
  - `tar cvzf <target_file_name.tar.gz> <file1> [file2] ...`
  - ex: `tar cvzf hw1.tar.gz src*.v wv1.out wv3.out`

# Linux Commands

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- Unzip
  - `tar xvfz filename.tar.gz` (if it is `.tar.gz`)
  - `unzip filename.zip` (if it is `.zip`)
  
- Delete files (rm: remove)
  - `rm filename`
  - ex: `rm s1.v s2.v t*`
  
- Delete a directory
  - `rmdir directory_name`

# Troubleshooting

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- design\_vision (Design Compiler)
  - “-bash: design\_vision: command not found”
    - Run “/net/ic/tools/synopsys/syn/bin/design\_vision” instead of “design\_vision” to launch design\_vision.