Tutorial – Linux

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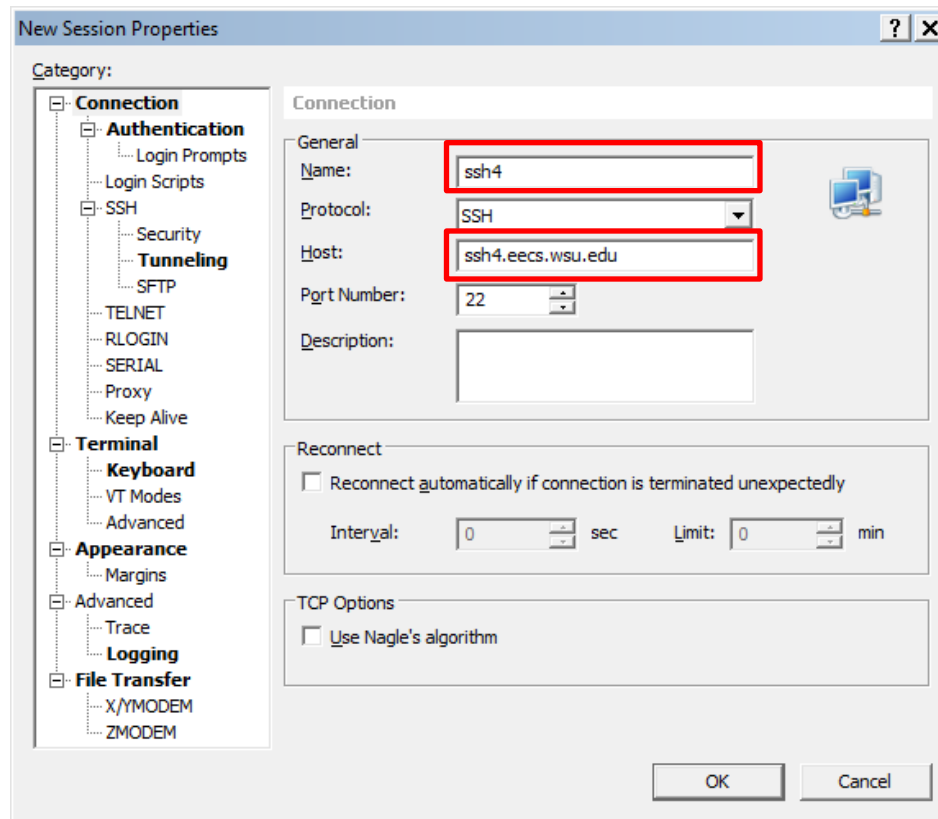
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Goal

- Learn how to use Linux

For Windows Users

- 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".
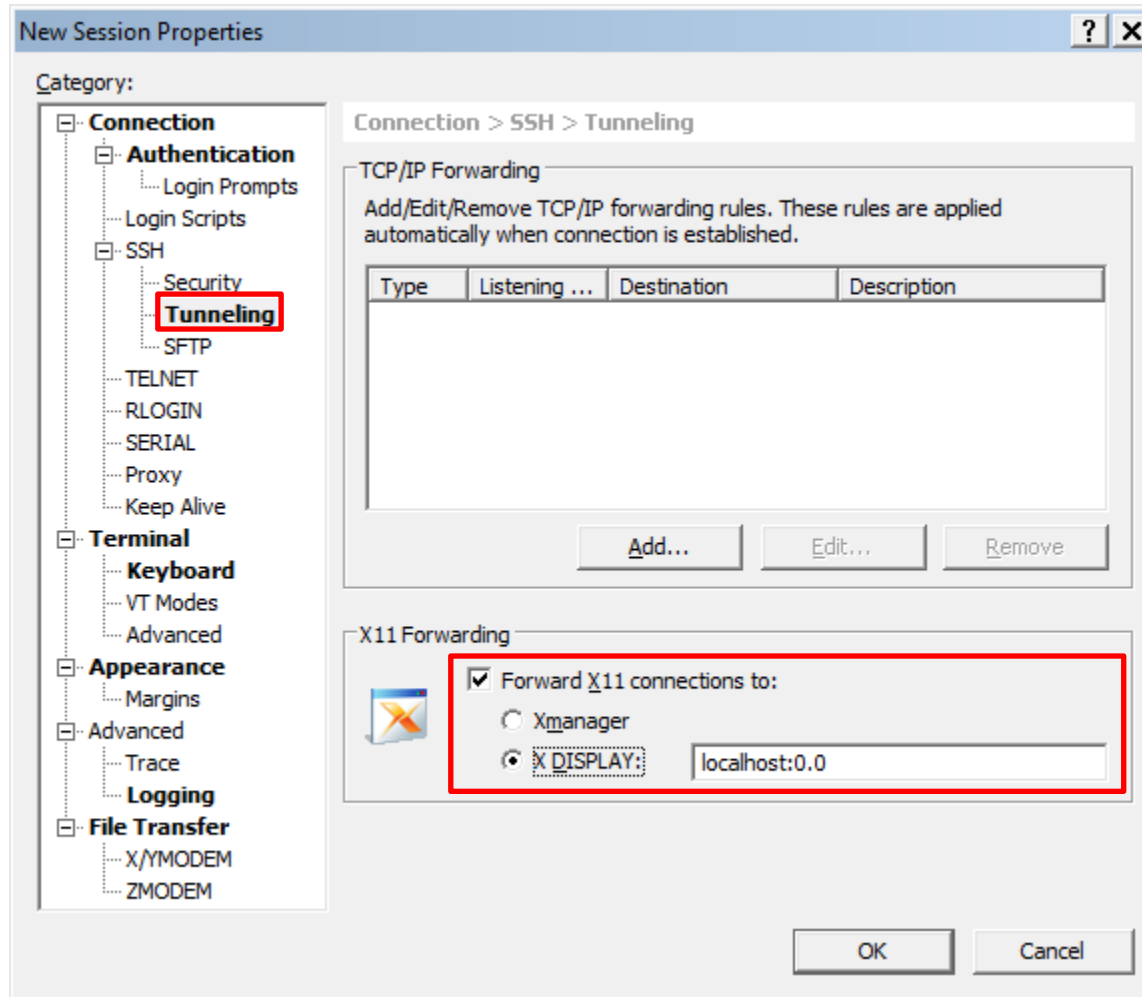 - Enter a name for the session and a host (server) address.

Xshell

- 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:

            _        _              _    _  _
 ___ ___  | |__  / |           \ \  ___ ___  | |__  / |/ _ \
/ __/ __| | '_ \ | |     ___  \ \/ __/ __| | '_ \| | | | |
\__ \__ \ | | | || |    |___|  / /\__ \__ \ | | | || |_| |
|___/___/ |_| |_||_|          /_/  |___/___/ |_| |_||_|\___/

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

For Windows Users

- 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

- 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

- 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

- Create a directory (folder).
  - mkdir directory_name
  - ex: mkdir ee434

- Go to the directory (cd: change directory).
  - cd directory_name
  - ex: cd ee434

- 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

- 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

- 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.