ECE 4730: Embedded Systems II

Project 0: Connecting to the server.

Objectives

* Install Cisco AnyConnect and use it to connect to UVU's VPN.
* Install Xming and enable X11 forwarding on PUTTY to allow GUI interfacing with the server.
* Transfer files between the two.
* Set up and run Vivado on the server (please only use as backup).

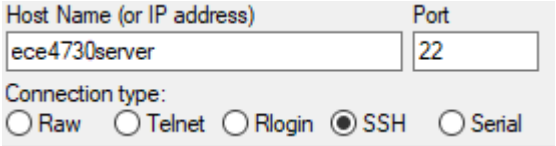
Procedure

Part 1- Download and Install

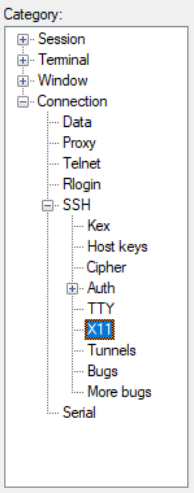
1. To request a VPN for UVU, google it, or click here, and follow the instructions. This is used to access the on-campus server.
2. Search PuTTY download, or click here, and run the downloaded executable. This is used to connect to the server.
3. Search Xming download, or click here, and run the downloaded executable. This is used to enable GUI interaction with the server (not necessary, but extremely useful on occasion).
4. Search Winscp download, or click here, and run the downloaded executable. This is used to facilitate file transfer between server and client (not necessary, but extremely useful, always).

Part 2- Connection and Interface

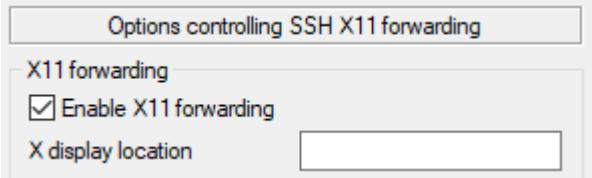
1. Open PuTTY and enter the following in the initial screen, but do not open the connection yet.



2. Now, on the left-hand side, find and select Connection -> SSH -> X11.



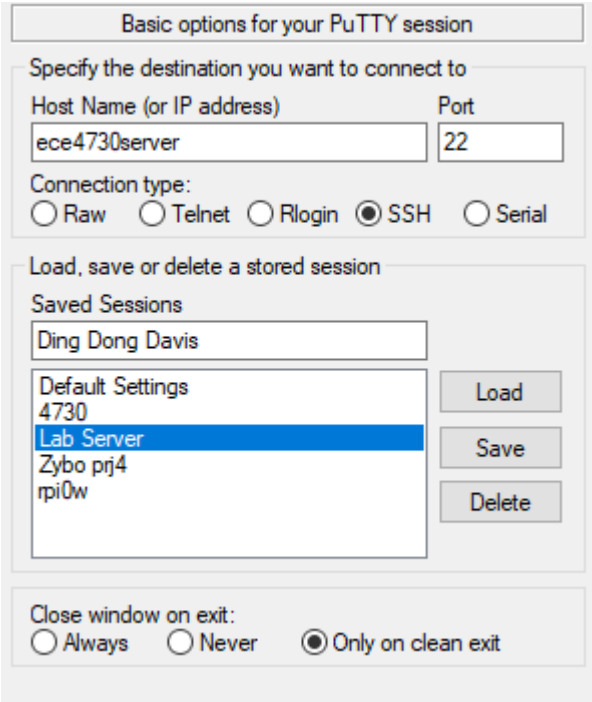
3. Check the box that says “Enable X11 Forwarding”.



4. You are now good to go. I would suggest saving this Session with the following steps:

3: Session Save

5. Return to the Session menu:



6. Under Saved Sessions, give your session a memorable name (probably not “Ding Dong Davis”).

7. Then click “Save”. Congratulations!
8. You may now “Open” the connection.
9. Your user name is your first name, followed by the first initial of your last (unless otherwise specified).
10. Your default password will be “changeme123” (please change this immediately).

3: Terminal Use

11. Notice the text at the beginning of every new command. It has the following meanings:
    Username@hostName:path_to_directory$ ($ means you’re just a user).
12. To change your password, run “passwd”.
13. Run “ls”. There should be nothing shown. Run
    cp –r ../brock/tars-an .
    This recursively copies the folder tars-an, which has the files you’ll need for future labs.
14. Make a directory to copy the git repo from github (mkdir folder_name_here) and then change directory (cd folder_name_here) into it.
15. Run the following commmands:
    git init
    Git clone https://github.com/Brownbr32/Embedded_II
    This will copy the git repo to your server account.
16. Navigate to the extracted u-boot directory (now referred to as **<u-boot>**) using the Linux commands “cd” and “ls”.
17. Return to home (~) directory (cd ~).

3: GUI Use

18. There is a text-editing app not unlike Notepad++ called gedit. Use gedit to create and then edit a file (gedit new_file_name &).
19. If a new screen appears, then congratulations!! Your GUI is working correctly!

3: Vivado

20. There is a script that facilitates the opening of Vivado. From the home directory, run

    Cp ../brock/startVivado.sh .

21. Now that the script is copied, run
    ./startVivado.sh
22. Vivado should start up. Congratulations!

Part 3- File copying

In order to make use of the server, we need to be able to access the files created. We do that with WinSCP.

1. Open WinSCP, upon startup, you should be able to import PuTTY's saved sessions.
2. If you imported the saved sessions, use your memorably-named session, enter your username and password.
3. If you didn't, then select New Site and enter the respective information. (Host name is same as before, ece4730server).
4. Click Login.
5. The filesystem on the left pertains to your personal computer. The filesystem on the right pertains to the server. You can now copy files to and from the server! Wahoo!