

ELE 448 Lab Remote Access Tutorial

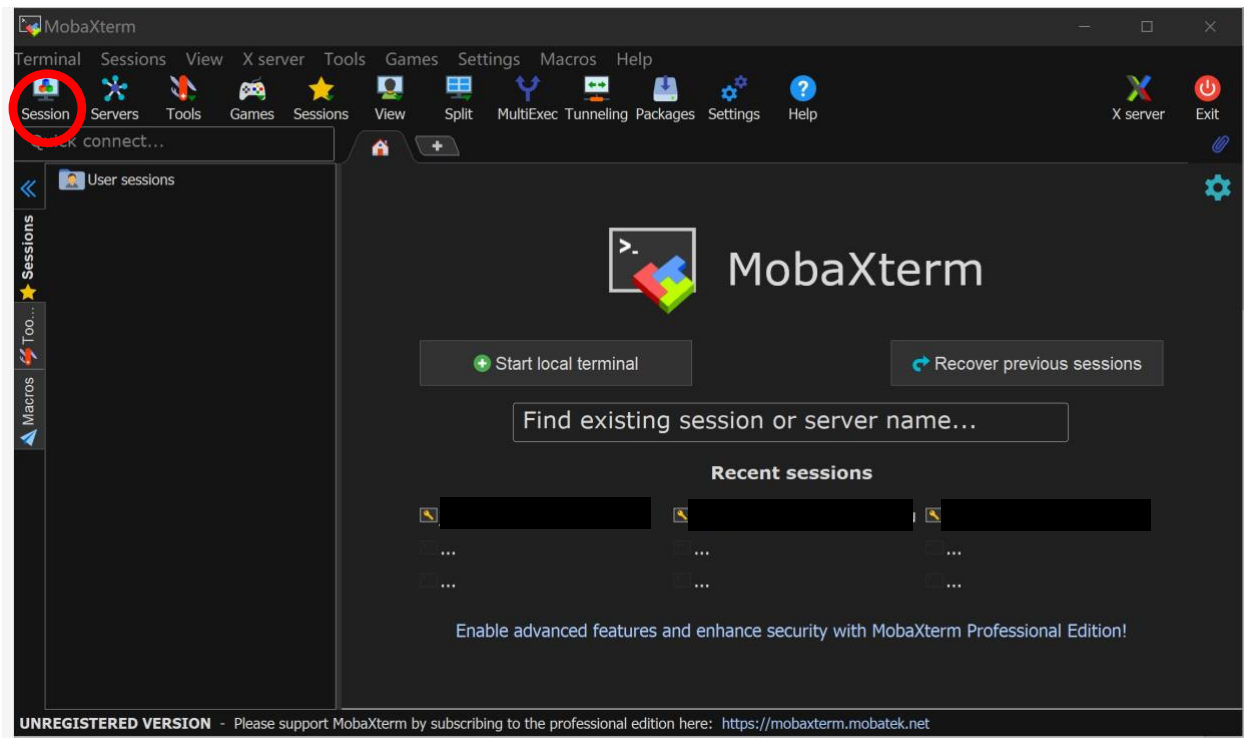
Step 0: Download Xpra and MobaXterm and install them

Xpra: <https://xpra.org/trac/wiki/Download>

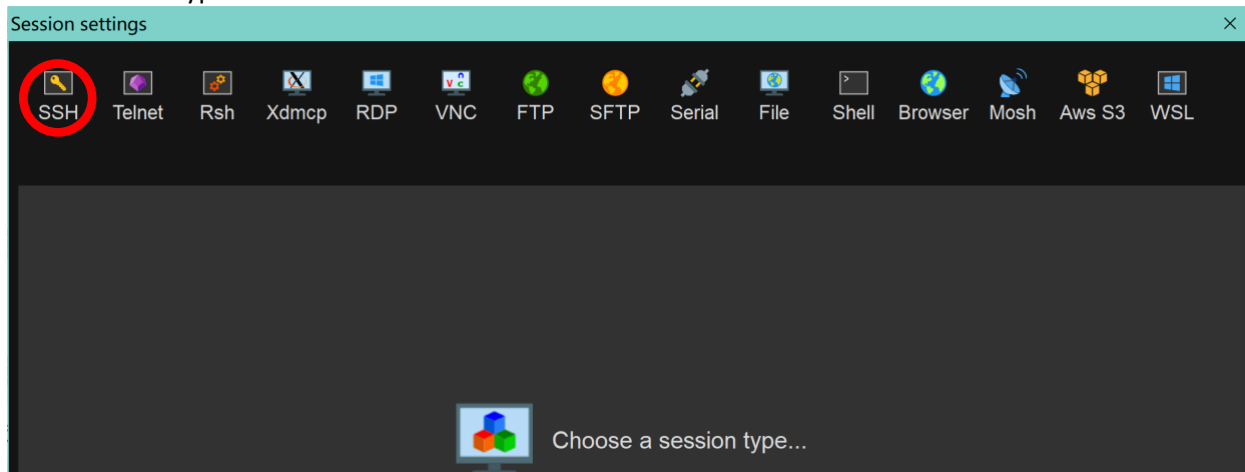
MobaXterm: <https://mobaxterm.mobatek.net/>

Step 1: Use MobaXterm to establish the SSH session with the remote computer

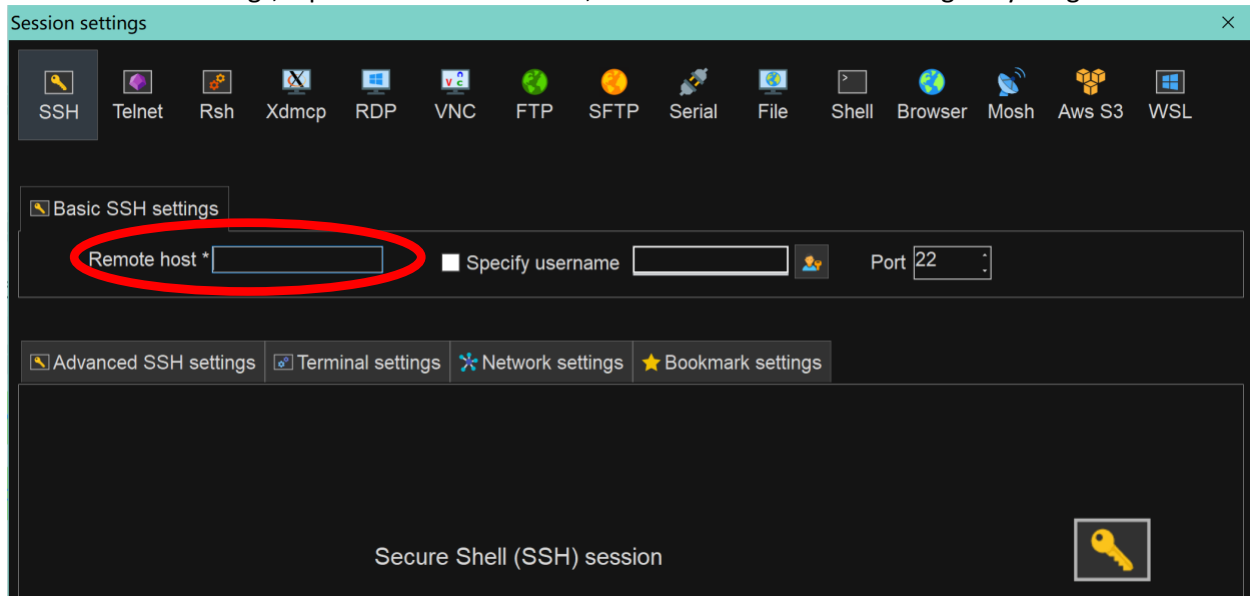
Open MobaXterm, and click “Session”:



Select Session type: SSH



In the Session Settings, input Remote Host name, and there is no need to change anything else:



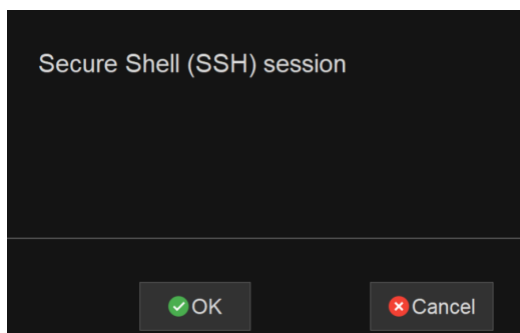
The Format of the remote host should be:

[username]@[computername].ele.uri.edu

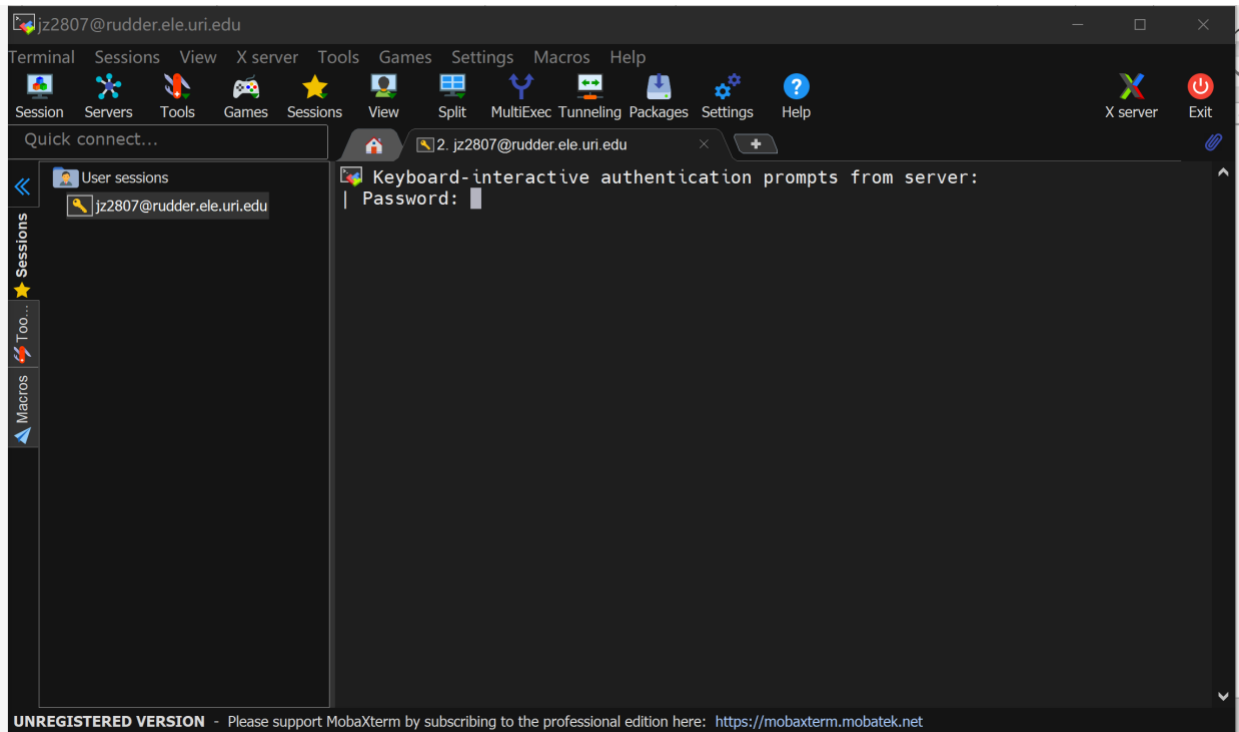
Replace username with yours, delete all brackets, the computername can be chosen from the list:

	A	B
	Name	Computer Name
1		jib
2		fin
3		keel
4		bow
5		oar
6		rudder
7		anchor
8		sail
9		mast
10		shark
11		sans
12		papyrus
13		toriel
14		eddie
15		undyne

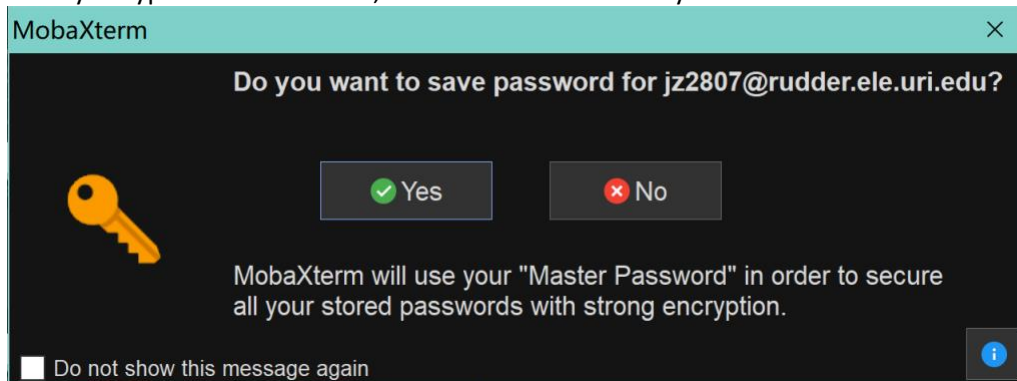
Then click "OK":



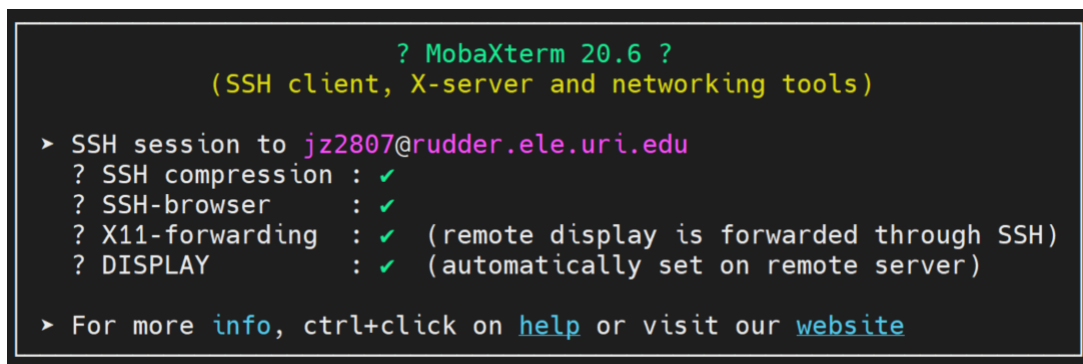
For example, if we choose “rudder” from the list, now in MobaXterm we should see the server asking for Password:



After you type in the Password, save it for further use if you want:



Now you should have successfully logged in to the server with your SSH settings:

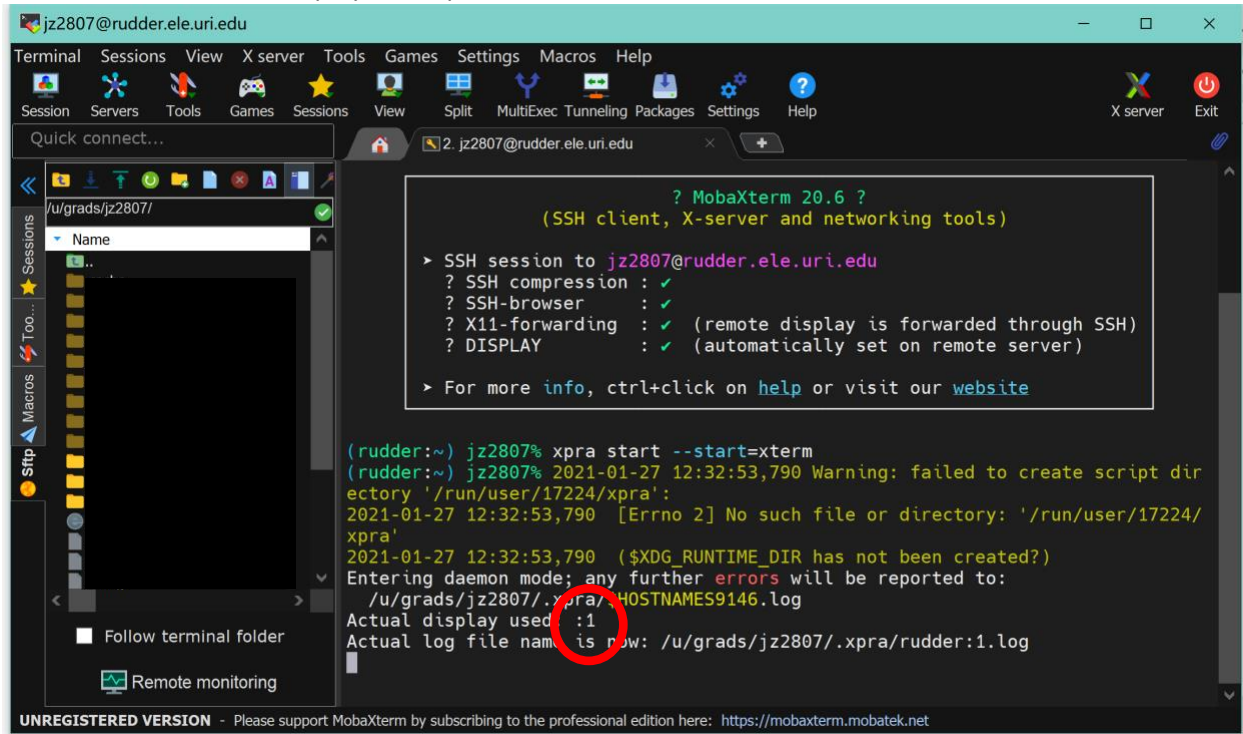


Step 2: Start the Xpra service on server's end:

Now that you can use Shell (Command Line in MobaXterm) to manipulate the server computer, start Xpra Service by the command:

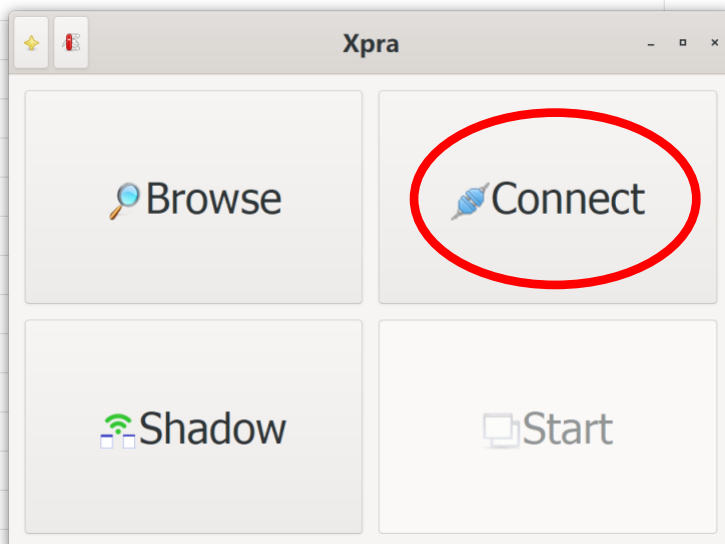
xpra start --start=xterm

Remember the “Actual display used” parameter for further use:

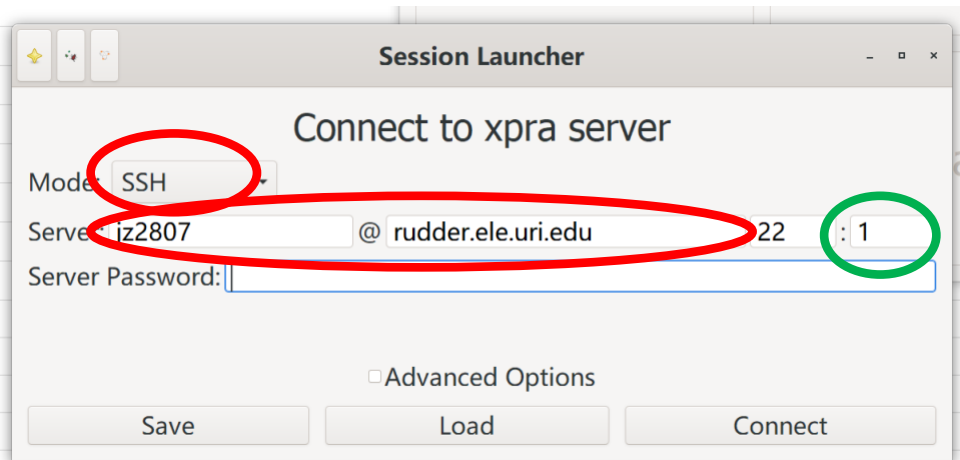


Step 3: Use Xpra on your local computer to connect to remote Xpra server:

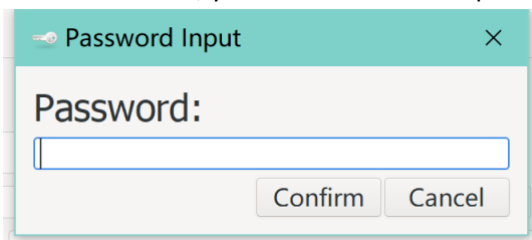
Open Xpra, Click “Connect”:



Choose “SSH” Mode, and Input the Server name, this should be the same as previous one, following the port number(22), type in the “Actual display used” parameter(green circle, 1 in this example):



Click “Connect”, you will be asked to input the Password again:



Now you are connected to the remote computer’s Xpra server, you may use “ls” to check files and folders.

Step 4: Basic Lab setup

Create the “digital_IC” folder if you have not done so:

```
mkdir digital_IC
```

Navigate to “digital_IC” folder:

```
cd digital_IC
```

Go to <https://www.ele.uri.edu/courses/ele448/Labs/Lab1/setup.txt>, copy the 4 lines into the cmd window:

```
ln -s /net/common/cad/NCSU/DesignKits/ncsu-cdk-1.6.0.beta/cdssetup cdssetup
ln -s /net/common/cad/NCSU/DesignKits/ncsu-cdk-1.6.0.beta/cdssetup/display.drf display.drf
ln -s /net/common/cad/NCSU/DesignKits/ncsu-cdk-1.6.0.beta/cdssetup/cdsinit .cdsinit
ln -s /net/common/cad/NCSU/DesignKits/ncsu-cdk-1.6.0.beta/cdssetup/cdsenv .cdsenv
```

You can now run Cadence by typing command

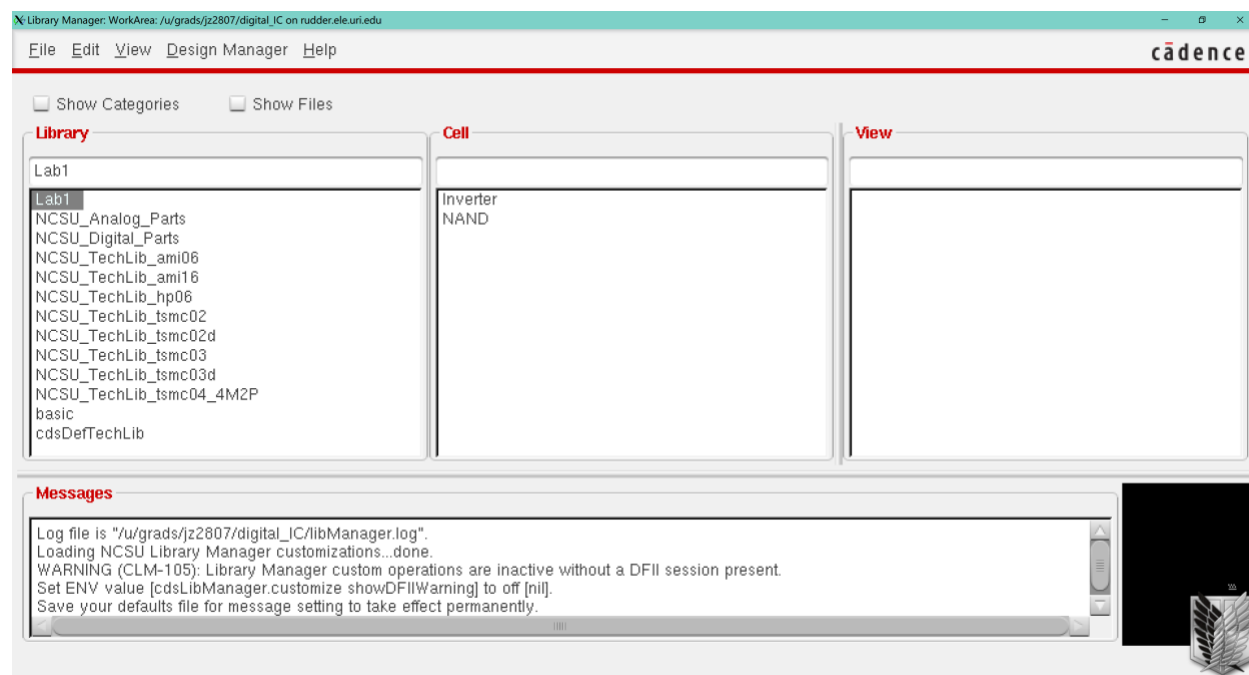
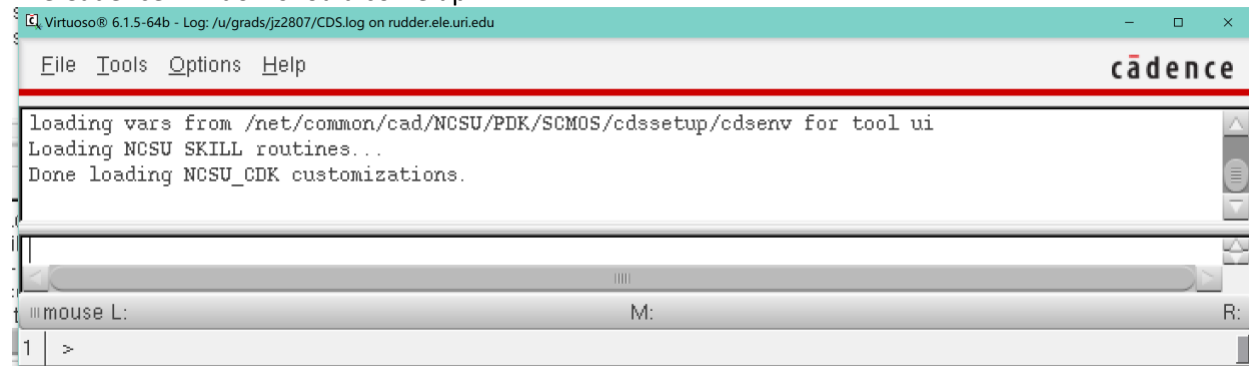
IC615

into the linux terminal while in your working directory:



```
rudder:~/digital_IC on rudder.ele.uri.edu
(rudder:~) jz2807Z
(rudder:~) jz2807Z ls
(rudder:~) jz2807Z cd digital_IC
(rudder:~/digital_IC) jz2807Z IC615
```

The Cadence Window should come up:



Step 5: Stop Xpra server

After you finish your lab, an important thing to note is that the server must be manually closed after it is done being used by using the command "xpra stop". Otherwise, there may be many servers running at a time limiting the performance.

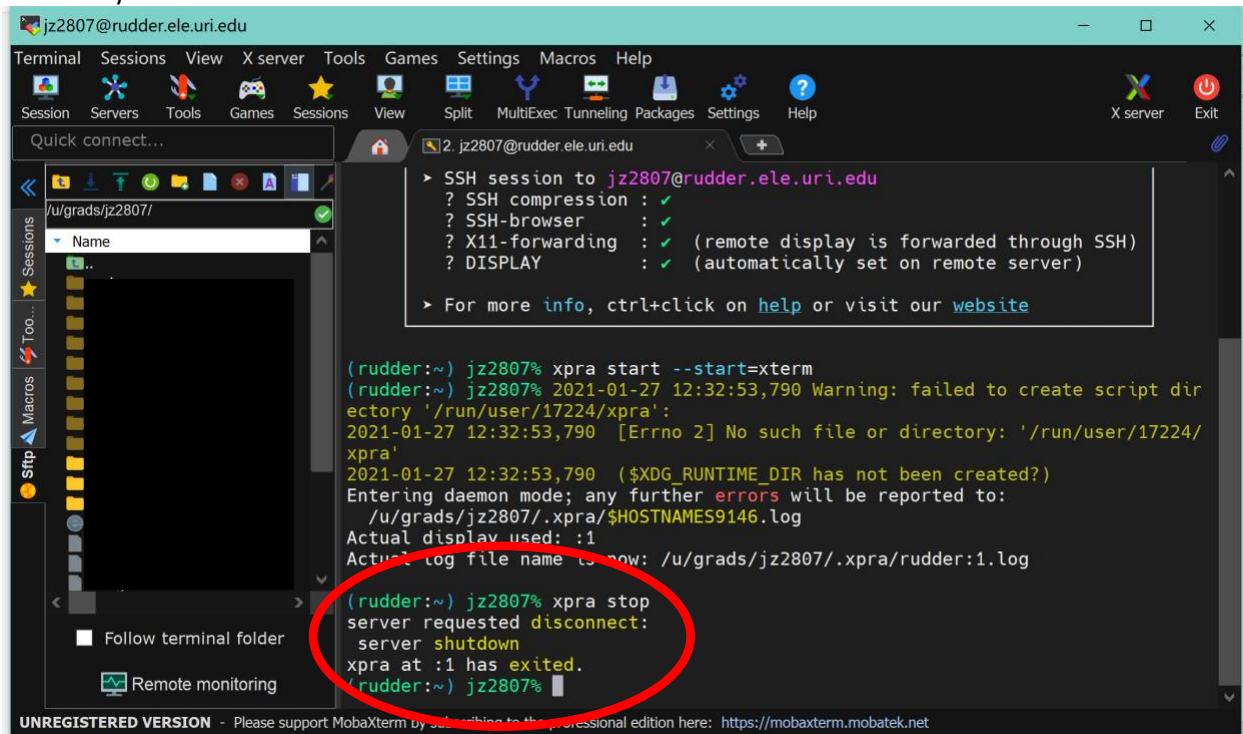
In the MobaXterm Window, Use

Ctrl + C

to exit the "Xpra start" command, but make sure to input

xpra stop

to actually shut it down:



```
(rudder:~) jz2807% xpra start --start=xterm
(rudder:~) jz2807% 2021-01-27 12:32:53,790 Warning: failed to create script dir
ectory '/run/user/17224/xpra':
2021-01-27 12:32:53,790 [Errno 2] No such file or directory: '/run/user/17224/
xpra'
2021-01-27 12:32:53,790 ($XDG_RUNTIME_DIR has not been created?)
Entering daemon mode; any further errors will be reported to:
/u/grads/jz2807/.xpra/$HOSTNAME$9146.log
Actual display used: :1
Actual log file name is now: /u/grads/jz2807/.xpra/rudder:1.log

(rudder:~) jz2807% xpra stop
server requested disconnect:
server shutdown
xpra at :1 has exited.
(rudder:~) jz2807%
```