

# Ngspice Setup

"I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail." - Abraham Maslow

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## Getting Setup

1. To display a remotely running application using a X-terminal, you will need to download a program to do X11 forwarding through ssh).
  - (a) For Windows users use either mobaxterm,  
<https://it.engineering.oregonstate.edu/accessing-unix-server-using-mobaxterm-ssh>  
OR putty, <https://www.putty.org/>,  
PLUS Xming, <https://sourceforge.net/projects/xming/files/Xming/6.9.0.31/Xming-6-9-0-31.exe/download>  
\* when connecting with putty make sure X11 forwarding is enabled
  - (b) For Mac users:  
Install: XQuartz, <https://www.XQuartz.org>  
Open terminal and run ssh with tunneling enabled:  
`ssh -Y username@access.engr.oregonstate.edu`
  - (c) For Linux users:  
ssh is installed already. Simply type:  
`ssh -Y username@access.engr.oregonstate.edu`
2. Now see if you can open a remote shell using putty/xmobaterm/XQuartz with the commands above. Then type: `gvim`. This should open the graphical version of vim. If you see the window below, you are successfully running secure shell with tunneling.

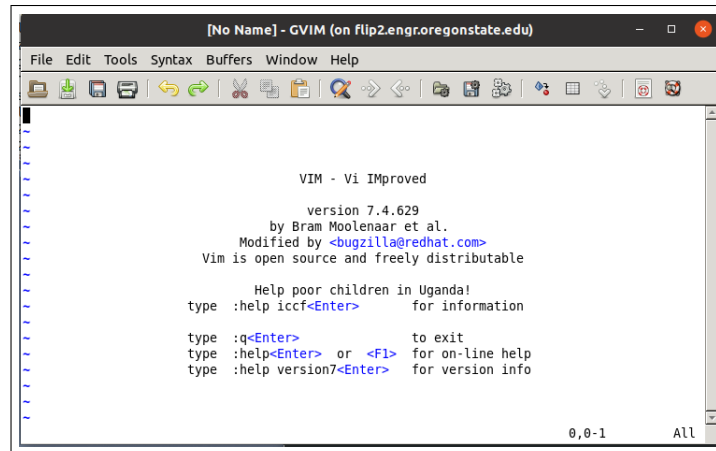


Figure 1: gvim in a X-term Window

3. Now let's see if you can run ngspice. Sometimes an application is not found because of an incomplete \$PATH environment variable. Within your terminal window, type: `whereis ngspice`. You will see the path to the executable. If not, see your TA to fix it.
4. Now download the file `simple.sp` to a working area on your COE account (probably a "flip" machine).
5. Invoke ngspice on the spice file `simple.sp` by typing:  
`ngspice simple.sp`  
 You should see the simulation run and produce a time/voltage plot. If so, you are all set. You can exit ngspice by typing `exit` at the ngspice prompt.

## One more thing

1. Using a random computer from anywhere, you can connect to win10 PCs with lots PC-based software via Citrix (this may require an incognito browser):  
<https://apps.oregonstate.edu/Citrix/StoreWeb>  
 connect to "MIME EECS Desktops"