VM-Gui install notes

---------- Part 1 ----------

1 Go to vm.cs.utahtech.edu
2 Fill out VM Worksheet (Match VLAN to correct class if more than one)

VM Worksheet (keep this the entire semester)

VLAN #: 3066

IP's: 144.38.218.8 – 144.38.218.15

Gateway: (Starting IP + 1): 144.38.218.9

GUI Subnet: (256 – 8 (IP's) = 248): 255.255.255.248

CLI Subnet: (CIDR Notation - Starting IP/29): 144.38.218.8/29

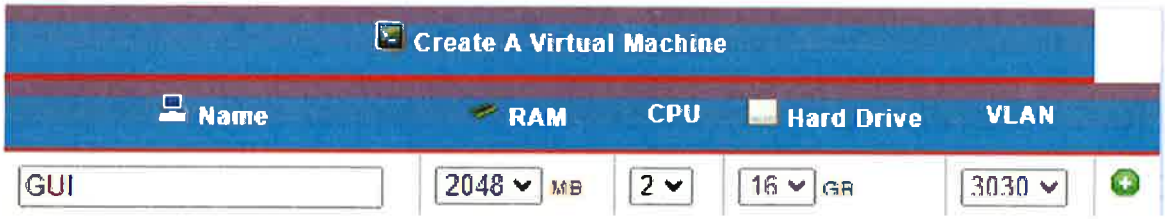
Broadcast: (Last IP in range): 144.38.218.15

Usable IP's:

1. (starting IP+2): **144.38.218.10** for **GUI Install**
2. (starting IP+3): **144.38.218.11** for _____
3. (starting IP+4): **144.38.218.12** for _____
4. (starting IP+5): **144.38.218.13** for _____
5. (starting IP+6): **144.38.218.14** for _____

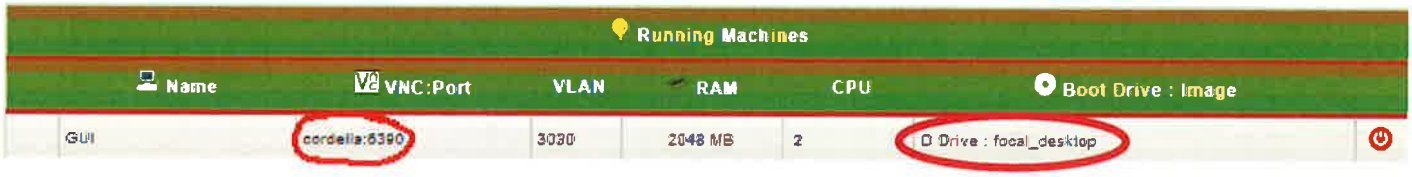
DNS Servers: 144.38.192.2, 144.38.192.3 **Search domains:** it1100.cs.utahtech.edu

3 Put in the following info: Linux-GUI, RAM 2048, CPU 2, Hard Drive 16



4 Click the green button to create machine. **(1 min)**

5 Make sure you choose **D-Drive** and **focal_desktop** Then click Green Button. **(2 min)**



6 You may need to refresh the screen to see your running machine. Write down the VNC:Port.

----------END Part 1----------

For part II you will need to use a VNC viewer. This is a non-secure connection to your computer. Your computer is currently trying to install the software that is on the D drive. To see the instillation, you need a monitor to the computer. You get this with a VNC viewer. VNC viewers are generally free.

CREATING A TUNNEL

1 Open a terminal (or cmd in windows).

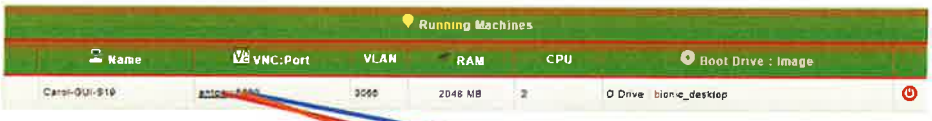
2 Make sure you are on your own machine (not ssh.cs.utahtech.edu or scratch.cs.utahtech.edu).

3 **ssh <username>@ssh.cs.utahtech.edu -L <port#>:<machine>:<port#>**

4 Open your VNC viewer and put the following in the text field.

5 **localhost:<port#>**

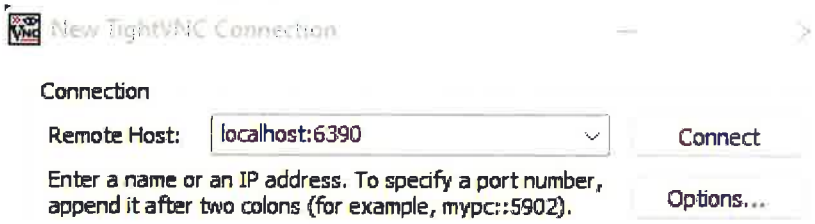
EXAMPLE where VNC:Port is antony:6080



Create Tunnel in terminal

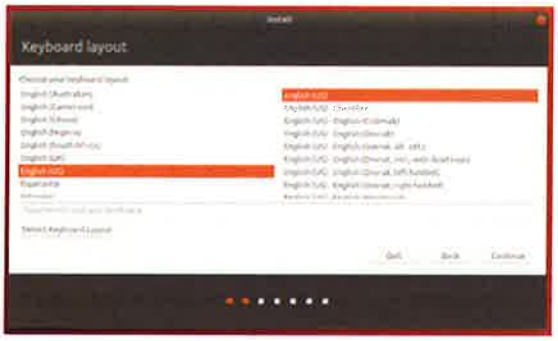
ssh <username>@ssh.cs.utahtech.edu -L 6390:cordelia:6390

Enter the following in your VNC viewer: **localhost:6390**



----------Part 2 – Installing Linux ----------

1 Click "Install Ubuntu"



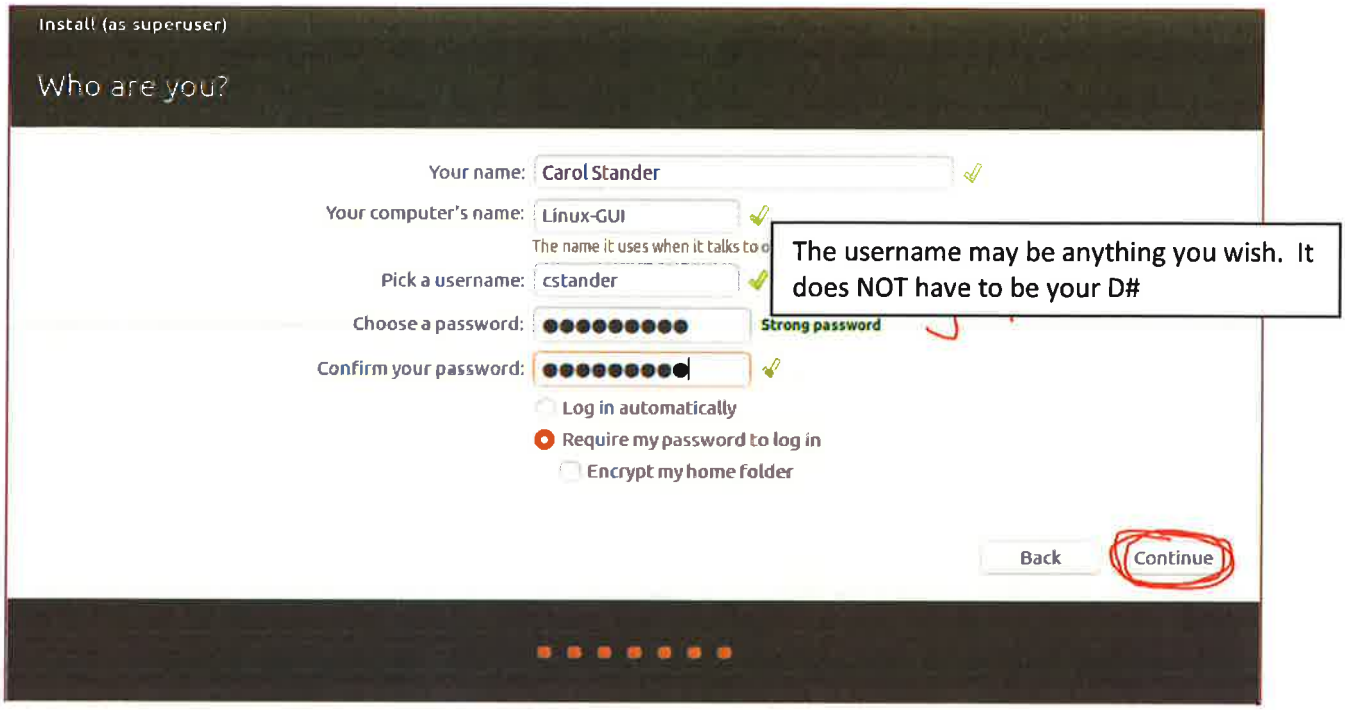
2 Click "Continue"

3 Choose **"Minimal installation"** Then click "Continue"

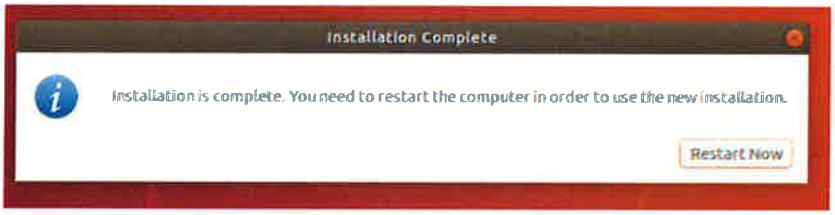
4 Keep first option selected to erase disk and then click "Install Now"

5 Click Continue

6 Select Mountain Time Zone by clicking near Denver and then click continue

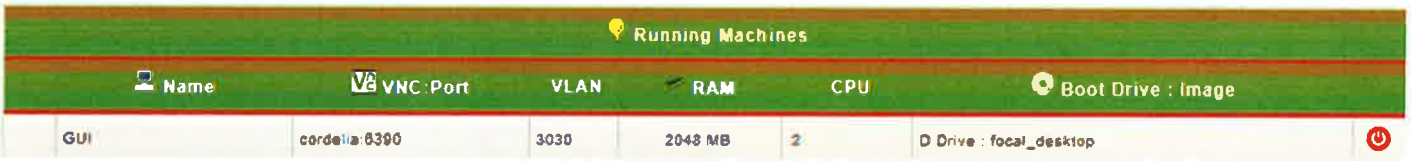


7 Enter your information and then click "Continue" **(Takes a while – at least 6 minutes)**

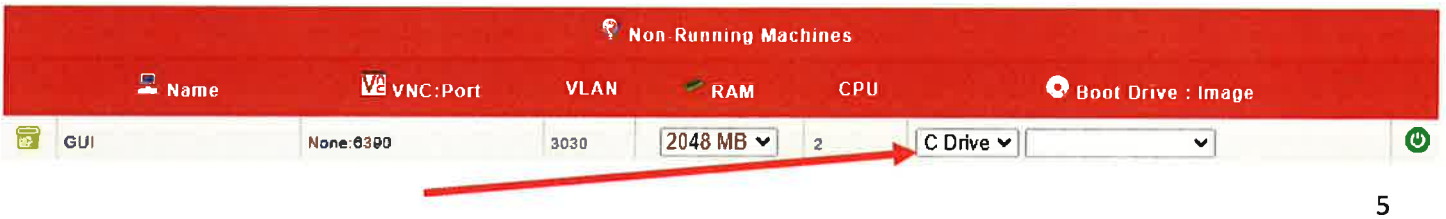


8 Click Restart Now

9 Close VNC Viewer



10 Refresh vm.cs.utahtech.edu and then click the red button.



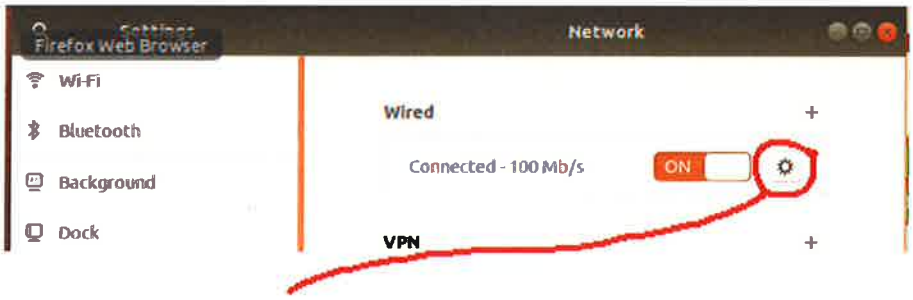
11 **Make sure it is on the C Drive!** Refresh and then Click the green button
12 Check your VNC:Port and use the current one to continue.
13 Open your VNC viewer and wait (takes 1-2 min)
14 Enter your password when the account comes up and wait.

---------- Enter Network Information ----------

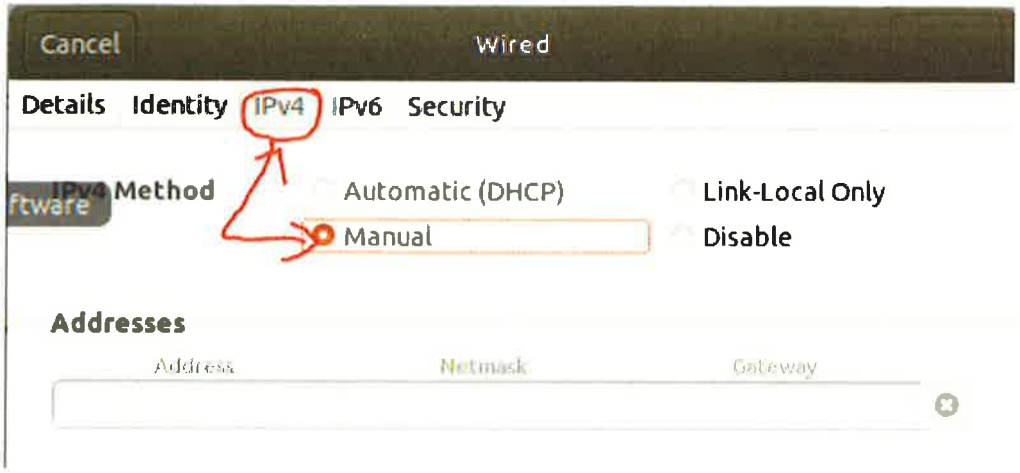
You now need to set up your computer to get to the internet. The computer is connected to a router via a wired connection. We will use the worksheet created earlier to enter the information.

1 Click on this icon in the top right of your machine. 

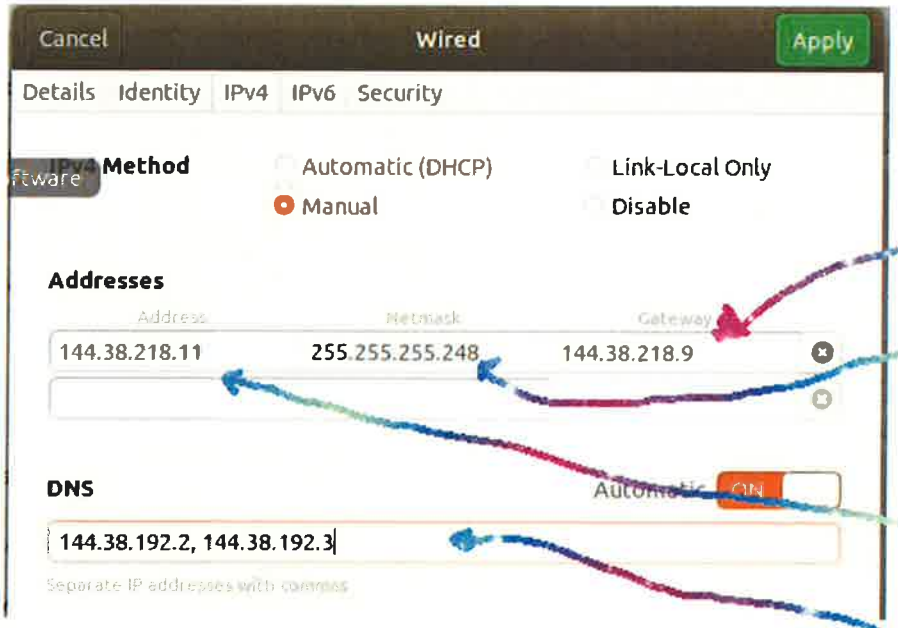
2 Choose Wired Connected and then Wired Settings.



3 Click on the settings wheel.



4 Click on IPv4 and Manual to get to this screen.



5 Enter information from Worksheet. Then click "Apply" in the top right corner.

Worksheet #1
CIT VM INFO:
IP's:
144.38.218.8 – 144.38.218.15
VLAN:
3066
Gateway: (Starting IP + 1)
144.38.218.9

Subnet: (256 – 8 (IP's) = 248)
255.255.255.248
Broadcast: (Last IP in range)
144.38.218.15

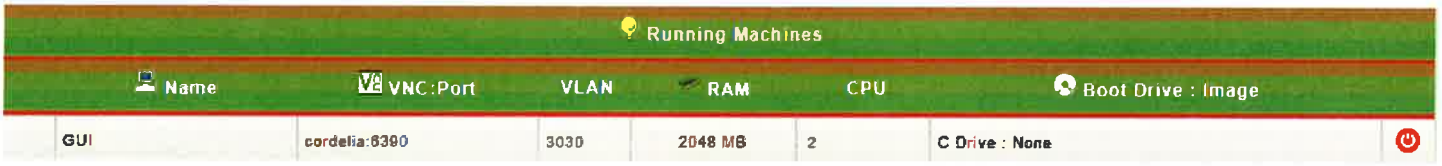
Usable IP's: (First = Starting IP + 2)
1. 144.38.218.10
2. 144.38.218.11 (bionic desktop)
3. 144.38.218.12
4. 144.38.218.13
5. 144.38.218.14

DNS Servers
144.38.192.2, 144.38.192.3

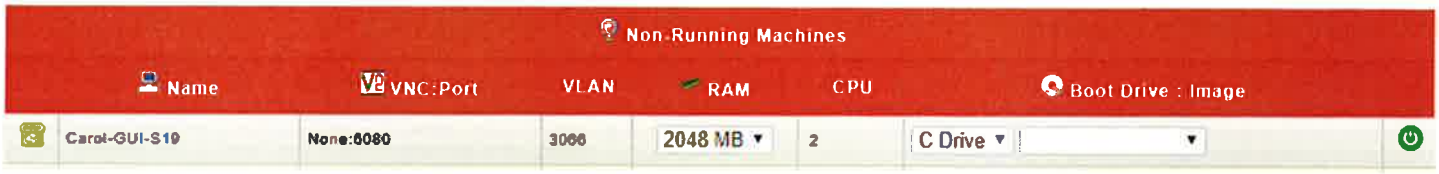
Search domains:
it1100.cs.dixie.edu

15 Have your virtual machine turnoff by clicking on the icon in the top right corner and choosing shutdown.

16 Go to vm.cs.utahtech.edu and turn off your VM by clicking the red button.



17 Refresh vm.cs.dixie.edu and then click the green button to restart your machine. Make sure it is on the C drive!



6 Your VNC:Port can change so check it and then get into the VNC viewer with the current port.

7 The network button should be showing the network without the ?. 

8 To test your network connections launch firefox.

---------- Part 3 Install ssh ----------

Installing SSH

1 open terminal by clicking on the dots in the bottom left corner and then typing "terminal" in the search bar.
2 sudo apt update
3 sudo apt install openssh-server

---------- Part 4 Change your theme ----------

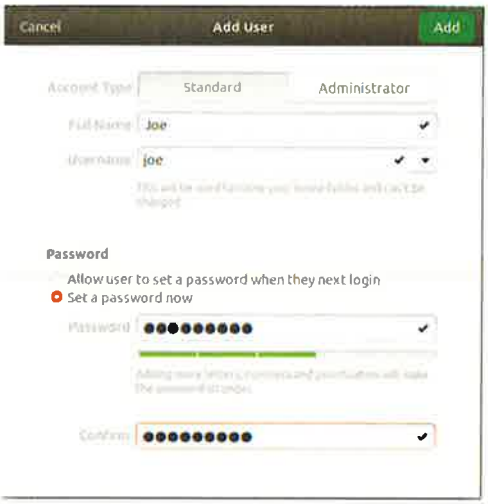
1 Click on the dots in the bottom left corner and you should see the settings wheel. Click on the settings wheel.
2 Choose Background
  2.a HINT (If you click and hold on the top of the task bar it will detach from full screen mode. This will allow you to see more of the window which will then enable you to change the settings on the Lock Screen.

---------- Part 5 Install vim ----------

1 open terminal by clicking on the dots in the bottom left corner and then typing "terminal" in the search bar.
2 sudo apt update
3 sudo apt install vim

---------- Part 6 Add user Joe ----------

1 Click on the dots in the bottom left corner and you should see the settings wheel. Click on the settings wheel.
2 In settings you need to scroll down to the bottom of the left menu and choose "Details"
3 In the "Details" menu choose "Users"
4 In the top right there is an unlock button, click it. (You will be asked for your password)
5 The unlock button changes to a green "Add User" button. Click it.



6. You will need to log out.

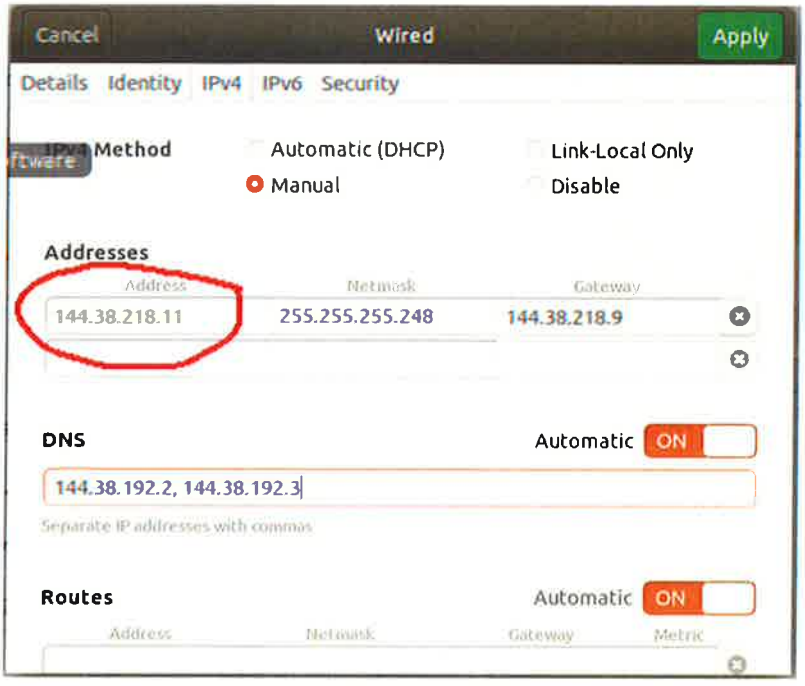
---------- Part 7 ssh into Joe and list directory ----------

1) Log in to your VM as Joe. This is important or the next step won't work.

2) Open a terminal on your local machine. (NOT in the new Linux VM)

3) Get into scratch.

4) ssh into your new Linux VM. You will use the ip address you gave your VM.



Example: `d00123456@scratch:~$ ssh joe@144.38.218.11`

Run the command ls

You should see: Documents, Pictures, etc.

Add instructor keys to your virtual machine:

Login at yourself on the virtual machine (not joe)

DO NOT copy paste as one block – Copy one line at a time.

```
sudo bash
wget http://computing.utahtech.edu/it/3100/sources/install_key.bash
chmod +x ./install_key.bash
./install_key.bash
rm ./install_key.bash
exit
```

Run the grader on scratch:

The grading script will be run as you are logged into scratch. The command you will execute will be similar for all of your assignments that have an autograder. Here is a sample of the command you will run: `run_grader.py --n 5 --ip 1.2.3.4`. **NOTE** you will pass in the ip address of your virtual machine that you have created. You will see some feedback. You should make sure that all your tests pass and that your score is correctly recorded. Please see your instructor for any help or questions on the output.