## Creating a Virtual Machine (VM)

Use your Web Browser to go to `vm.cs.dixie.edu`

Login with your CIT user name and password

Create a new VM Machine using the setting specified in the assignment:

- **Name**: Linux-CLI
- **RAM**: 512M
- **CPU**: 1
- **HD**: 6G
- **VLAN**: default

Press the green `plus(+) button`

Booting your machine:

- **RAM**: 512M
- **Boot**: D Drive
- **Image**: xenial_server

Press the green `power` button

Note the VNC:Port of your new machine and your **Base IP address**

## Tunneling Into VNCViewer

Create a Tunnel to your VM Machine

- Open a terminal and type the tunnel command (no angle brackets)
  
  ```
  ssh -N -p 22 <CIT username>@ssh.cs.dixie.edu -L 127.0.0.1:8585:<VNC:Port>
  ```

Leave that terminal open

Open your VNC Viewer

  - Connect to your VM using localhost:8585
### Installing Linux

Remember that this is keyboard based - Your mouse will not work.
Press **Enter** after each selection

**Language:** **English**

**Install Ubuntu Server**
**Language:** **English**

**Location:** **United States**

Detect Keyboard Layout: **No**

Configure Keyboard: **English(US)**

Keyboard Layout: **English(US)**

If Network Autoconfig Failed: (If it doesn’t fail you will put the network info in later)

- **Configure network manually**
  - IP **144.38.____.____** (base+2 for CLI install)
  - IP **144.38.____.____** (base+3 for GUI install)
  - IP **144.38.____.____** (base+4 for Partitions)
  - Netmask: **255.255.255.248**
  - Gateway: **144.38.____.____** (base+1 for all installs - should auto-complete)

Name Server Addresses: **144.38.192.2 144.38.192.3**

Hostname: **<cit-username>-CLI**

Domain name: **<Default>**

Full name: **<enter your first and last name here>**

Username: **<enter your CIT username here>**

Password: **<enter your CIT password here>**

Re-Enter: **<CIT password>**

Encrypt: **No**

Time Zone: **Yes**

Partition: **Guided – use entire disk**

Select Disk: **<Enter>**

Write Changes: **Yes**

HTTP proxy: **leave blank** Updates: **No automatic updates**

Software Selection:
- Use the arrow keys to highlight
- Use the spacebar to check the box

Select: **standard system utilities** and **OpenSSH server**

Grub Bootloader: **Yes**

Installation Complete: **Continue**

Your virtual machine should automatically turn itself off

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**Re-login to vm.cs.dixie.edu**

**Restart the machine:**
- Find your vm and press the green **Power** button. *(Using C Drive and NO boot image)*
### Setting Up Network (Only if Network Autoconfig Didn’t Fail)

If Network Autoconfig Didn’t Fail:
- Edit your `/etc/network/interfaces` file
  ```
  sudo vim /etc/network/interfaces
  ```
- Replace everything after auto ens3 with:

<table>
<thead>
<tr>
<th>auto ens3</th>
</tr>
</thead>
<tbody>
<tr>
<td>iface ens3 inet static</td>
</tr>
<tr>
<td>address (base+2 for CLI install)</td>
</tr>
<tr>
<td>netmask 255.255.255.248</td>
</tr>
<tr>
<td>gateway (base+1 for all installs)</td>
</tr>
<tr>
<td>dns-nameservers 144.38.192.2 144.38.192.3</td>
</tr>
</tbody>
</table>

Restart the machine:
- Shut down the machine
  ```
  sudo halt
  ```
- Find your vm and press the green Power button. (Using C Drive and NO boot image)