**Proxmox HA**

Add one more instance of proxmox if you don’t already have 3. So, by the end of this project, you will have a total of 3 instances of proxmox and one instance of Freenas that is running as your nfs server. We need 3 instances in order to do High Availability. Some of these instances might be virtualized.

**High Availability**

1. You should already have two templates from the previous assignment. (ubuntu and pokemon)
2. Enable HA on proxmox. Assign a pokemon clone to have HA.
3. Make sure that if a node in your cluster fails, that your vm will restart on another node (this takes around 3 minutes).

**Different VLANs**

Clone 3 virtual machines from your ubuntu template. You should have the following setup:

- *(vm1)* on vlan 320 (this isn’t trunked so no need to tag). (Or no need to add the number 320 in the virtual machine network settings)
- *(vm2)* Do the same as the previous step but in vlan 321
- *(vm3)* Do the same as the previous step but in vlan 322

See below for ip allocation.

**Helps**

- The nfs iso share is at 144.38.192.167:/vol/student_vm/qemu/iso
- Here are the vlan numberings. You don’t have to do much with ipv6 as your nic should automatically get an ip address. I have listed the default ipv6 gateway that your machine will use.

```
Vlan 320 = ipv4: 10.150.x.y/16, ipv6: 2001:1948:B10:2270::1/64
Vlan 322 = ipv4: 10.170.x.y/16, ipv6: 2001:1948:B10:2272::1/64
```

**Inception**

Not necessary to do this, but it is fun.

To virtualize a proxmox instance you need to follow the instructions [here](#). Essentially add the required line to the file on your physical proxmox server and reboot. Then make sure that your nested instance uses the CPU type of host.

**To Pass off**

Prove that you have done everything. Demonstrate that each vm can ping the gateway. To ping the ipv6 gateway you do something like `ping6 2001:1948:B10:2270::1`.