**Objective:**  The objective of this lab was to install a virtual environment on a rack server and then create a virtual machine running Windows Server.

**Equipment List:** The equipment Justin and I used included dell rack servers, a DVD of ProxMox VE, and a computer & browser to remotely connect to ProxMox.

**Virtual Environment:**

Before we began the installation of ProxMox, we first removed our 76gb hard disk and decided to proceed with just the 300gb drive. After that change, we started the installation process.

The first step to installing the ProxMox VE was to enter the BIOs of Hyper3 (our computer) to check for correct boot-up settings and to confirm it contained the correct amount of memory. After we confirmed those settings, we went through the installation steps for ProxMox. After proceeding through the entire ProxMox setup, our installation failed due to the VE being unable to partition to our hard disk (our drive was not recognized). To fix this issue, we created a new virtual disk in system setup. After fixing that issue, we, once again, went through the ProxMox setup.

Once we complete the setup, we were able to connect to our ProxMox control panel through a browser by going to “<https://10.136.212.44:8006>” and using “root” as our username and “cmst;315” as our password. After we had access to our control panel, we used WinSCP to upload the Windows ISO file from our desktop into the folder “var/lib/vz/template/ISO”.

After we successfully uploaded the Windows ISO file to our VE, we made a few changes to the setup settings. We named our node “hyper3”, we named the VE WinServer3, we selected the storage to be local-IVM, we selected our Windows ISO for the ISO image, we chose to use 4 CPU cores, and, finally, we chose to have 16,384 MiB for the memory.

Once we had the Windows environment setup and running, we made some changes to the ethernet properties. We edited the IPV4 settings to make our IP address “10.136.212.53”, and to make the default gateway address “10.136.212.1.”

Finally, after the VE was completely set up, we were able to remote desktop into it from the lab computers. To do so, we opened the remote desktop application, typed in the IP for the name of the device (10.136.212.53), chose “other user”, and used “administrator” as the username and “cmst;315” as the password.

**Windows Server Information:**

1. What settings did you change on Windows Server after it was installed?

* We changed the ethernet properties.
* Changed the IP to 10.136.212.53
* Changed the default gateway to 10.136.212.1
* We enabled remote desktop

1. List your Computer name, IPv4 address, Subnet mask, Gateway address, and DNS addresses.

* Hyper3
* 10.136.212.53
* 255.255.252.0
* 10.136.212.1
* 10.133.253.130

1. What is the Ethernet address (physical address) for your network interface?

* 10.136.212.53

1. Based on the IP information what is the network id of the lab’s network?
2. Based on the IP information what is the host id of your computer?
3. What is the range of the host IP addresses on this subnet?
4. What is the purpose of the Default Gateway?

* The default gateway is an intermediary device that connects our computer to the internet.

1. What symptoms would you expect if you didn’t have a valid Default Gateway address entered on your computer’s IP configuration?

* I would expect that our computer would be unable to connect to the internet.

**References:** N/A

**Conclusion and Reflection:** During this lab, Justin and I were able to successfully install a virtual environment onto Hyper3 and create a virtual machine that can run our Windows server. We had a difficult time installing ProxMox initially, due to our drive not being recognized but we were able to fix that issue by creating a new virtual disk in the system setup. After that initial hiccup, it was smooth sailing from then on. Overall, this lab was a complete success.