LAB REPORT 2

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1.Why we use SSH tunneling to connect to our virtual server (ESXi)?

> We used SSH Tunneling to connect to our virtual server to ensure that we bypass the firewall that has been set on the server. We created port forwarding rules (provided by the professor) to allow us into the server.

2.Why we use Windows machine to connect to our virtual server (ESXi 5.5)?

> We use window’s machines because a lot of people around the world use the operating system, and most students in CSE courses are able to navigate easily around windows.

3.Why we create a virtual switch?

> We create a virtual switch because it allows for an internal network to connect to the existing switch for the external network.

4.How many network cards on hadrian?

> the ‘hadrian’ virtual machine has 4 NICs or (Network Cards) that we created based on the lab instructions.

5.Why do we have more than one network cards?  
> We have more than one network card created to allow us to connect to the different ports that are listening on the server. With more than one network card, our connection will be harder for it to be dropped.

6.Please list the names of your virtual switches.

> I created only one virtual switch based on what Lab 2 had asked for. The name of the switch is called “Coyote Network 20-1”

7.What are differences between following:

> Thick provision Lazy Zeroed: means all the space designated for the virtual disk files is reserved when the VM is created. The lazy zero means that blocks containing older data on the storage device are only cleared when the virtual machine write new data to the disk for the first time.

> Thick provision Eager Zeroed: Is a VMware provisioning format that creates a VM disk in a default thick format. Thick Provision means that the space required for the VM is reserved when the VM is created. The phrase ‘zeroed out’ was explained in the last question, however: means that blocks on the physical storage device are formatted with zeros to overwrite any older data.

> Thin provision: A method of optimizing the efficiency with which the available space is utilized in storage area networks (SAN). TP works by allocating disk storage space in a flexible manner among multiple user’s, based on the minimum space required by each user at any given time.

8.What is a Hypervisor?

> It is also known as a virtual machine monitor: creates computer software, firmware or hardware that runs on the virtual machine. A computer that runs more than one hypervisor is called the host machine.

9.What is a .vmdk file?

> It is known Virtual Machine Disk is a file format that describes containers for virtual hard disk drives to be used in virtual machines like VMware.

10.What are the different types of virtualization?

> In today’s world, as technology expands so does our comprehension. There are 5 different types of virtualization. Listed are: Application Virtualization, Desktop Virtualization, Hardware Virtualization, Network Virtualization, Storage Virtualization.

11.What is VMware vMotion?

> This is what enables the live migration of running virtual machines from one physical server to another with zero downtime, with continuous service availability, and complete transaction integrity.

12.What is the difference between clone and template in VMware?

> A template is a master copy of a virtual machine that can be used to create many clones. When cloning a virtual machine, you create a copy of the entire virtual machine. This includes settings, and any configured virtual devices, installed software.

13.What is a snapshot?

> What is known as a VM snapshot, it is a copy of the virtual machine’s disk file (VMDK) at a given point in time. Snapshots provide a changelog for the virtual disk and are used to restore a VM to a particular point when the system fails.

14.What is VDI?

> Virtual Desktop Infrastructure is virtualization technology that hosts a desktop operating system on a centralized a server in a data center. This term was coined by VMware.

LINUX COMMANDS

(10%)

List all the UNIX Commands that you used in this lab and explain each command:

1.

2.

TROUBLESHOOTING:

(50%)

From this lab what troubles did you have?

Identify the problem:

Problem 1: The issue that I ran into while trying to create my VM was I was unable to find the .iso file that was needed to create the VM.

How did you solve the problem?

Solution 1: I was able to locate the file after trying to troubleshoot with other students that sit right next to me. We were able to figure out that in order to access the .iso file we also had to connect to the coyote repo section of putty. When connecting to the repo side, the .iso file was located and I was able to successfully configure my VM.