

NAME: ██████████
PROJECT #01

Changing to /home/ckelly/it341/████████/reports

Current working directory is: /home/ckelly/it341/████████/reports

-rw-r--r-- 1 ██████████ it341-1G 12127 Feb 19 15:38 report_01.txt

IT 341 - 01

Wednesday, January 24, 2018

Project 1
=====

+ The Goal of this project is to successfully install an Ubuntu Server on a Virtual Machine using VMWare Workstation.

+ After receiving confirmation that my Unix account has been created on the CS Unix Server, Me and my Lab Partner ██████████ were able to use our credentials to login to our Windows physical host station it21.

+ Once successfully logged in, we proceeded to check if our host station it21 was connected to the correct ethernet outlet. We made sure that the Cat5 cable was plugged to the right-hand-side (RHS) CAT5 outlet associated with our host and therefore, confirming that we are connected to the Ubuntu server that acts as a router for the network it.cs.umb.edu.

+ To launch the install of the virtual machine, we followed the steps below:

> We launched VMWare Workstation.

> We clicked on Create a New Virtual Machine.

> A selected a Typical configuration

> With the choice of either letting the installation proceed by itself or having the install of Ubuntu server done step by step, we chose the latter since this will be our first time installing Ubuntu server on a virtual machine.

> A prompt window asking us from which location we would like to install the operating system with 3 radio button options:

* Installer Disc

* Installer Disc Image file (ISO):

* I will install the operating system later

We selected the last option "I will install the operating system later"

> Another window prompt requesting the selection of an operating system and the version would like to install appeared. We selected LINUX radio button as the operating system and we selected UBUNTU 64-bit as the version from the drop-down

> In the next prompt window, we were asked to set a meaningful name for our virtual machine and the location where we want to install it. For the naming of our virtual machine we used the following structure:

* The name of our host: it21

* Our section number: 1

* Our group ID: a

We added "vm" between the letters and numbers of our host station name to indicate that it is a virtual machine. Finally, we added a dash "-" between the host name and the section number making the final name "itvm21-1a". As to the location where we want to install our virtual machine, we selected the directory C:/IT341/section1a of the host station it21 by clicking on browse and going to the location. Once the folder "section1a" was selected we clicked OK.

- > The next window prompt asked us to select the disk size we want for our virtual machine and if we want to store the virtual disk as one file or split it to multiple files. For the disk size we left it as the 20GB recommended size for Ubuntu 64-bit OS and we choose to split the virtual disk into multiple files by clicking on the radio button associated with the option.
- > A final prompt window requesting from us to click the Finish button to create the virtual machine. After clicking the Finish button, the installation continued until the end.
- + At this point our virtual machine has been successfully created and we can now proceed to installing Ubuntu server as the operating system for our new virtual machine.
- + Our host station contained the ISO image we need for the installation of Ubuntu server but before we proceeded to install the operating system, we needed to temporarily change the value in CD/DVD drive from "Auto Detect" to the ISO file location. For that we followed the following steps:
 - > Under Devices in the new virtual machine we double clicked CD/DVD (SATA) to open the prompt window and change the connection option.
 - > We check the radio button "Use ISO image file:"
 - > We clicked "Browse" and followed the following directory:

C:\OS ISOs\Linux\Ubuntu\Server\ubuntu-16.04.1-server-amd64.iso

With the file selected and highlighted we clicked open then hit OK.

This concluded our temporary value change in the CD/DVD, and it became connected to the ISO image of Ubuntu Server and therefore, we could proceed the next step of installing the operating system of the virtual machine.

- + To launch the install of Ubuntu Server we followed these steps bellow:
 - > Started by powering the virtual machine.
 - > A prompt window asked to select a language to which we selected "English", and hit Enter ← *That detail is unnecessary!*
 - > The next prompt asked to select which operation we would like it to perform. we choose Install Ubuntu Server, and hit Enter.
 - > Another prompt window asked to select a language again and we selected "English" again, and hit Enter.
 - > The next window asked us to select our location. We choose the United States, and hit Enter.
 - > The following window asked us if we want Ubuntu to detect the keyboard layout. We choose No and hit Enter.
 - > Since we did not let the system detect the keyboard for us we were required to manually select the country of origin of the keyboard from the list provided in the next prompt. We choose English (US) ~~and hit Enter~~.
 - > Still configuring the keyboard, we were asked to select a keyboard layout this time in the next window. We choose English (US) ~~and hit Enter~~.
 - > A new prompt window asking to enter a hostname appeared and we did not want to have it as the default "Ubuntu" so we used the following:
 - * The name of our host: it21
 - * Our section number: 1
 - * Our group ID: aWe added "vm" between the letters and numbers of our host station name to indicate that it is installed in a virtual machine. Finally, we added a dash "-" between the host name and the section number making the final

- name "itvm21-1a" same as the name of our virtual machine ~~and then tabbed to <Continue> and hit Enter.~~ *← Again, this info is not wrong - just unnecessary*
- > The next window was for entering the Full name for the new user. We choose sysadmin ~~and tabbed to <Continue> and hit Enter.~~
 - > The next window was for entering the Username for your account. We choose sysadmin ~~and then tabbed to <Continue> and hit Enter.~~
 - > The following prompt requested us to choose a password for the new user. We choose itvm21-1a to be used by both of us and then we tabbed to ~~<Continue> and hit Enter.~~
 - > The following prompted us to re-enter the password to verify. We entered itvm21-1a again ~~and tabbed to <Continue> and hit Enter.~~
 - > The next window asked us if we want to encrypt our home directory. We choose No ~~and hit Enter.~~
 - > For the time zone in the following window, we kept it to New York since we are in the same time zone. We choose Yes ~~and hit Enter.~~
 - > In the next prompt, we used the up-arrow to select "Guided - use entire disk" ~~and hit Enter.~~
 - > For the partition disk window, we kept it to the default ~~and hit enter.~~
 - > When asked to write the changes to disks for the partition disks window, we used the left-arrow to move to <Yes> ~~and hit Enter.~~
 - > In the next window we were asked to enter the HTTP Proxy information. We left it blank ~~and hit Enter.~~
 - > The next prompt was for how we want to manage updates on the system. We choose No automatic updates from the options given to us ~~and then we hit Enter.~~
 - > In the additional software component window, we left everything as is since we want to install them using the command line later. ~~we tabbed to <Continue> and hit Enter.~~
 - > The next prompt window asked us to install the Grub boot loader to master boot record. We choose Yes ~~and hit Enter.~~
 - > The final window appeared after the installation is complete we tabbed to <Continue> ~~and hit Enter.~~

We have completed the installation.

- + Now that we have completed the installation, we needed to change the CD/DVD device back to "Auto Detect". To do that we followed these steps:
 - > Using Ctrl-Alt to return focus to the host, we shut down the guest using Ctrl+E.
 - > Under devices we double clicked on CD/DVD (SATA) to open the prompt window and change the connection option.
 - > We check the radio button "Use physical drive:"
 - > We select "Auto Detect" then clicked OK
- + This concluded our first day of our project since class time ended and we will continue working on this another day

Monday, January 29, 2018

- + We picked up where we left off last week by turning our virtual machine back on

+ We used our login credentials that we used in the setup of our virtual machine

```
> itvm21-1a login: sysadmin
> Password: team name
```

+ To check if we could reach the outside we used the ping command to reach yahoo.com

```
> ping -c 5 www.yahoo.com
```

Our ping test was successful.

+ We proceeded to update the package lists for upgrades, using the apt-get command, but since the command requires superuser privilege we preceded the command by sudo

```
> sudo apt-get update
```

Note: this time we were asked to enter the password for the superuser

+ The next step was to use the sudo command combined with the apt-get command to upgrade the list of available packages and their versions

```
> sudo apt-get upgrade
> type Y for the line prompt asking, "Do you want to continue?" and hit enter
```

Note: This time we didn't need to enter the password again because it is still active.

+ To install the ssh-server as instructed, we used the apt-get utility again

```
> sudo apt-get install openssh-server
> type Y for the line prompt asking, "Do you want to continue?" and hit enter
```

+ We logged out of our system as instructed

+ We created a snapshot of our Virtual Machine

+ We checked if our snapshot exists in the snapshot manager.

+ Taking the snapshot created two snapshot files, one with the extension .vmsn (Virtual Machine SNApshot) and the other one is with a .vmem (VMEM File) with the title as the vm name and snapshot number as title. It also created a number of files with extension .vmdk (Virtual Machine Disk File) corresponding to the number Virtual Machine Disk system files besides an extra leading file and a another .vmem with an alpha numeric title instead of the Snapshot1. We can copy these files to use them as backup. The location of these files is the same as where we installed our virtual machine which was:

```
> C:\IT341\section1a
```

+ Questions:

Don't forget citations!

```
> What does LTS stand for, and what does that mean? Please explain.
```

- * LTS stand for Long Term Support. Ubuntu LTS versions are released every two years. They are supported for three years for desktops and five years for servers.

```
> What is an LVM? (It stands for "logical volume manager".) Please explain
what a logical volume is and what a logical volume manager does.
```

logical

- * A logical volume manager is a device mapper target that provides volume management for the Linux kernel

- * A logical volume provides storage virtualization. With it, we are not restricted to physical disk sizes.

> Please explain what the sudo command is, how it is used, and why we need it.

- * It stands for SuperUser DO. It is a higher security privilege command that allows the user access to elevated level commands. it is

considered

a root command. We need it to execute advanced commands that cannot be executed using basic commands.

> Please explain what apt-get is and why we use it.

- * apt-Get is the command-line tool for working with APT software

packages.

APT (Advanced Packaging Tool) is part of the Debian software packaging system. We use it to install, update, upgrade or remove packages in the system.

> Please explain what "snapshots" are and why they are useful to us

- * A snapshot is a copy of the virtual machine's disk file (VMDK) at a given point in time. They provide a change log for the virtual disk and are used to restore a VM to a particular point in time when failure or system error occurs.

+ This concludes our project 1.

Formatting		
1.5 = Good, 1 = Acceptable, 0.5 = Needs Improvement, 0 = Unacceptable	1.5	/ 1.5
Writing Quality		
1.5 = Good, 1 = Acceptable, 0.5 = Needs Improvement, 0 = Unacceptable	1.5	/ 1.5
Log Content		
5 = Excellent, 4 = Good, 3 = Fair, 2 = Needs Improvement, 1 = Poor, 0 = Nothing/Minimal	5	/ 5.0
Questions Content		
2 = Great, 1.5 = Good, 1 = Fair, 0.5 = Poor, 0 = Nothing/Minimal	2	/ 2.0
TOTAL	10	/ 10.0