**Overview**

This lab starts with demonstration and directions from your Professor. Follow the instructions from your Professor to complete the various activities, then turn your attention to these questions. You may want to take a few notes during the lab activities to make it easier to answer the questions. Some research will be required to answer these questions in full.

I have highlighted the spots where you need to provide answers in red.

**Outcomes**

This lab is designed to build familiarity and comfort with a virtualization platform.

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| --- | --- |
| Elements of Performance | Related Course Learning Outcomes |
| EOP 1.3. Install virtualization software | CLO 1. Understand virtualized environments |
| EOP 1.1. Run diverse virtual machines | CLO 1. Understand virtualized environments |
| EOP 1.2. Investigate forms of virtualization | CLO 1. Understand virtualized environments |

**Time on Task**

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| --- | --- |
| Learning Activity | Approximate Time |
| Follow the Professor-led demonstration | 45 min |
| Read, research, and write answers to research section | 30 min |

**Lab Questions**

1. What *virtualization* software did we use today?

Oracle VM Virtual Box

1. Who produces this software? Do they make any other software, and if so what is it?

Oracle. They make a ton of software and applications. Top 3 are: Oracle Database, Oracle Cloud Infrastructure, Enterprise Applications. Java & Oracle Database are popular.

1. Is the software we used considered a Type 1 or Type 2 virtualization platform? Why?

Type 2. Because it is hosted on top of the existing school operating system.

1. What kinds of guest OSes can you install using this tool?

Windows, macOS, Linux. There are other less popular OS you can run as well. This is not true for some mobile applications

1. What other software could you use to virtualize a computer?

VMware or Microsoft Hyper-V

1. Does the software running on a VM “know” that it’s running on a virtual computer?

No it does not. That is one of the benefits of virtualization is you can test real scenarios virtually.

1. Given the characteristics of the VMs that we used today, how many of them could run at the same time on your computer (make your best guess)?

Based on my resources at school I could run 2 or 3. That is enough processing and memory to go around for the 4 total OS running.

1. What was the key factor limiting the number? (Note: this may be different for you than for other students…)

I think that depending on the task CPU or RAM. Storage is easy to expand. CPU and RAM not so much. RAM would limit because I could run everything super slow on the CPU.

1. Other than to complete labs and classroom activities at school, how do you think you could use virtualization during your time at Mohawk?

Testing applications on macOS and Linux

1. Consider the snapshot technology that we used in the lab. How do you think that would be useful to you? How about in a business setting?

Snapshots provide a safety net for experimentation. It also can increase efficiency when testing interactions. Reloading vs rebooting

1. What other technology did we talk about today that could allow us to run applications in isolation?

Docker. We talked about how it’s the king of containers and wrote a lot of the standards.

1. In your opinion, which of these technologies would be the most appropriate choice for running an old version of an application at the same time as you are using the current version? Explain your answer.

Virtualization. IF I am trying to run the program in 2 versions on the same computer I need to have a way for them not to interact with each other. VMs solve that. I am not a container fan for testing.

1. Are any Enterprise-level virtual solutions free? If so, what are they?

Yes. Microsoft Hyper-V

1. What is the most popular Enterprise-level virtualization platform?

VMware vSphere is used most by fortune 100 companies and is most popular.

Congratulations! You’ve successfully made it to the end of this lab! Yay!

Now, save this file and upload it to the submission link on the course page. If you’re not sure how to do that, please ask! That’s what the Professor is for!