**DevOps Internship Assessment – LuthfanAuliaRezeki**

**Platform: Vmware**

**OS: Kali Linux**

**TASK 1 – Linux System Administration**

**User and Group Management**

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1. Command adds new devops\_users and sets the default directory as the home directory and uses bash as the shell.

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1. Groupadd command adds a new group called devops\_group.

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1. Adds devops\_user1 and devops\_user2 to devops\_group.

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1. Adds sudo privileges tot devops\_user1 and devops\_user2.

**File Permissions**

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1. Mkdir is short for make directory and -p signifies that /opt/devops\_data is the parent directory.

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1. Sudo touch allows the creation of project.txt file under the parent directory.

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1. This command allows the assigns devops\_user1 that is part of the devops\_group to be the default owner of the project.txt file.

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A table with numbers and letters

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1. To change the permissions of this file and directory, I referred to this table (since I don’t remember the modes by heart). The 3 numerals represent the 3 groups of permissions. 6 allows read and write for current user, 4 allows read for group. And 0 represents no access for others.

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1. To verify the permissions has been set.

**Process Management**

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1. Sudo nano

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1. Bash script for process\_monitor.sh. Ctrl + O and enter to save. Ctrl + X to exit.

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1. Make the script executable.

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1. Referenced ChatGPT for this part since I am not exactly sure how to setup the schedule script.

**Task 2: Shell Scripting**

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1. File path of where the backup will be stored.

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1. Script that is used for the backup.sh. Save it using Ctr; + O, Enter than Ctrl + X to exit the file.

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1. Make the script an .exe file.

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1. Allows anyone and any group to access the file.

RESULT:

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1. Creates a backup in .tar.gz file.

**Disk Usage Alert**

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1. Install mail utilities and other tools. Choose Y. Then Select Yes to reboot once setup.

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1. Create a script file in this directory.

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1. Code that will allow alerts to be sent to the email ( In this case its my own personal email) If the disk usage exceeds 80%. Save it using Ctr; + O, Enter than Ctrl + X to exit the file.

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1. Make it an .exe file.

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1. Open the crontab file to set the schedule to every 10 mins.

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1. Code to set it to 10 mins intervals.

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1. Checking the disk usage and deliberately download. The supposed outcome should be sent to an email address but since this entire configuration is done using a virtual machine – other things need to be configured such as an SMTP servers for it to be able to communicate externally.

**BASIC NETWORKING**

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1. Run ifconfig to check for ip addresses and other important information.

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1. Since Netplan is not installed on my machine by default. Run sudo apt install netplan.io to install all the tools, utils and libraries.

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1. Run this command to configure the netplan yaml file.

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1. This will be the structure of what should be stored inside the netplan config file. The address should correspond to your machines IP Address which can be found by running ‘ifconfig’ command. The default gateway is (usually) ending with .1. in my caser its 192.168.114.2. Save it using Ctr; + O, Enter than Ctrl + X to exit the file. You can also check the default IP address running the ip route grep default-gateway command.

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1. Run sudo netplan apply. This applies all the configuration made. If everything is correct it should just create a new line of prompt.

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Description automatically generated6. Creating file name for the network config script.

A computer screen shot of a computer program

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1. Simple script to basically print out current IP Address, subnet, pings google and returns if pinging google was a success or a fail.

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1. Make it a .exe file.

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1. Run the command to execute it. If the connectivity returns as OK then everything has been done correctly.

**FIREWALL CONFIGURATION**

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1. Install ufw.

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1. Commands to allow ssh, http, deny incoming traffic, accept outgoing traffic. Then enabling the firewall. Then restart the machine.

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1. To check saved configurations.