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CYSE 270

Assignment 9

Task A - Backup your system (Using crontab) [100 points]

Scenario: Performing system backup can be time-consuming, and the process is often overlooked. For this scenario:

1. Create a new user Alice (with home directory).

```
(zyron@kali)-[~]
└─$ sudo useradd -m Alice
[sudo] password for zyron:
```

2. Write a shell script that backups Alice's home directory by creating a tar file (tape archive), using the following steps:

a. Do the following:

- Take 2 inputs with their values- your MIDAS name and current date (for example, midas=Mohammed).
- Create a variable named as filename that should be assigned the value as MIDAS-date (example output after executing the script would be like, [Mohammed-2024.11.04-22.08.01.tar.gz](#)).
- Using tar command, create a tape archive for Alice's home directory (/home/Alice) and the filename created above (in step-2-ii). (Please learn about tar command in Linux for its usage)

b. Move the tape archive file/tar file (created in step 2-iii) to /var/backups/ directory using correct command in linux.

c. To optimize the disk usage, pick a compression algorithm (bz2, gzip, or xv) to compress the tar file you created in /var/backups/ in the previous step-2b.

```
zyron@kali: ~
Session Actions Edit View Help
#!/bin/bash

MIDAS_NAME=zsumu001
current_date=$(date +%Y.%m.%d-%H.%M.%S) #| tr -d '\n'

filename="${MIDAS_NAME}-${current_date}.tar"
compressed_filename="${filename}.gz"

tar -czf /var/backups/$compressed_filename /home/Alice
```

3. (30 Points) Create a crontab file to keep the scheduled task running for 3 minutes, then check the contents in the /var/backups directory.

```
zyron@kali: ~
Session Actions Edit View Help
GNU nano 8.6 /tmp/crontab.0E4rt7/crontab *
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').
#
# Notice that tasks will be started based on the cron's system
# daemon's notion of time and timezones.
#
# Output of the crontab jobs (including errors) is sent through
# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h dom mon dow  command
*/3 * * * * /home/zyron/alice_backup.sh
```

```
(zyron@kali)-[~]
└─$ ls /var/backups
alternatives.tar.0      dpkg.diversions.0      zsumu001-2025.11.09-20.42.10.tar.gz
apt.extended_states.0  dpkg.statoverride.0   zsumu001-2025.11.09-21.28.44.tar.gz
dpkg.arch.0            dpkg.status.0         zsumu001-2025.11.09-21.31.01.tar.gz
```

4. (10 Points) Cancel the crontab jobs.

```
(zyron@kali)-[~]
└─$ sudo crontab -r
```