**Week 5 Homework: Archiving and Logging Data**

**Step 1: Create, Extract, Compress, and Manage tar Backup Archives**

1. Command to **extract** the TarDocs.tar archive to the current directory: tar -xf TarDocs.tar
2. Command to **create** the Javaless\_Doc.tar archive from the TarDocs/ directory, while excluding the TarDocs/Documents/Java directory: tar -cf Javaless\_Doc.tar –exclude-tag-under=Java ~/Projects/TarDocs
3. Command to ensure Java/ is not in the new Javaless\_Docs.tar archive: tar -tvf Javaless\_Doc.tar | grep Java

**Bonus**

* Command to create an incremental archive called logs\_backup\_tar.gz with only changed files to snapshot.file for the /var/log directory: sudo tar –listed-incremental=snapshot.file -czf logs\_backup\_tar.gz /var/log

**Critical Analysis Question**

* Why wouldn't you use the options -x and -c at the same time with tar? -x extracts a directory and -c creates one; they conflict with eachother.

**Step 2: Create, Manage, and Automate Cron Jobs**

1. Cron job for backing up the /var/log/auth.log file:

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Graphical user interface, text

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**Step 3: Write Basic Bash Scripts**

1. Brace expansion command to create the four subdirectories: mkdir -pv ~/backups/{freemem,diskuse,openlist,freedisk}
2. Paste your system.sh script edits below:

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1. Command to make the system.sh script executable: chmod +x ./system.sh

**Optional**

* Commands to test the script and confirm its execution:
* sudo ./system.sh
* cat ~/backups/freemem/free\_mem.txt

**Bonus**

* Command to copy system to system-wide cron directory: sudo cp ~/scripts/system.sh /etc/cron.weekly

**Step 4. Manage Log File Sizes**

1. Run sudo nano /etc/logrotate.conf to edit the logrotate configuration file.

Configure a log rotation scheme that backs up authentication messages to the /var/log/auth.log.

* + Add your config file edits below:

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