



Module 5 Challenge Submission File

Archiving and Logging Data

Make a copy of this document to work in, and then for each step, add the solution command below the prompt. Save and submit this completed file as your Challenge deliverable.

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.gz
```

2. Command to **create** the `Javaless_Doc.tar` archive from the `TarDocs/` directory, while excluding the `TarDocs/Documents/Java` directory:

```
tar -cvf Javaless_Doc.tar --exclude=TarDocs/Documents/Java ~/Projects
```

3. Command to ensure `Java/` is not in the new `Javaless_Docs.tar` archive:

```
tar -tvvf Javaless_Docs.tar | grep Java
```

Critical Analysis Question

4. Why wouldn't you use the options `-x` and `-c` at the same time with `tar`?

Well `-x` is extract and `-c` is create, so we'd essentially just be undoing everything if we used both at the same time

Step 2: Create, Manage, and Automate Cron Jobs

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

```
Crontab -e to open up it up
0 6 * * 3 tar -zcvf auth_backups.tgz /var/log/auth.log
```

Step 3: Write Basic Bash Scripts

1. Brace expansion command to create the four subdirectories:

```
mkdir -p ~/backups/{freemem,diskuse,openlist,freedisk}
```

2. Paste your `system.sh` script edits:

```
#!/bin/bash
#Free Memory

free -h > ~/backups/freemem/free_mem.txt

#Disk Usage

du -h > ~/backups/diskuse/disk_usage.txt

#Openlist

ls -lh > ~/backups/openlist/open_list.txt
```

```
#Free Disk
```

```
df -h > ~/backups/freedisk/free_disk.txt
```

3. Command to make the `system.sh` script executable:

```
Sudo chmod +x system.sh
```

Optional

4. Commands to test the script and confirm its execution:

```
I just cd'd into each and cat
```

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`.

- a. Add your config file edits:

```
/var/log/auth.log {  
    rotate 7  
    weekly  
    notifempty  
    missingok  
    compress  
    delaycompress  
    endscript  
}
```

