

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

1. Command to **extract** the TarDocs.tar archive to the current directory:

```
tar -xvf TarDoc.tar
```

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

```
tar cvvWf Javaless_Doc.tar TarDocs/ /home/sysadmin/TarDocs/Documents/Java
```

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

```
tar cvf Javaless_Docs.tar --exclude="Java" /home/sysadmin/Projects/TarDocs
```

Bonus

- Command to create an incremental archive called logs_backup_tar.gz with only changed files to snapshot.file for the /var/log directory:

Critical Analysis Question

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

Because -c creates the tarball and -x extracts a tarball

Step 2: Create, Manage, and Automate Cron Jobs

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

```
00 6 * * 3 tar -czWf /home/sysadmin/Projects/auth_back.tgz /var/log/auth.log
```

Step 3: Write Basic Bash Scripts

1. Brace expansion command to create the four subdirectories:
mkdir freemem diskuse openlist freedisk

Paste your system.sh script edits below:

```
#!/bin/bash
```

2.

```
#!/bin/bash
```

3. `free -h > /var/backups/freemem/freemem.txt`
4. `du -h > /var/backups/diskuse/diskuse.txt`
5. `ls -l > /var/backups/openlist/openlist.txt`
6. `df -h > /var/backups/freedisk/freedisk.txt`

7. 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`

Bonus

- Command to copy `system` to system-wide cron directory:
-

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:
2. `/var/log/auth.log {`

`weekly`

`rotate 7`

`notifempty`

`delaycompression`

`missingok`

`}`