BACKUP AND RESTORE

The purpose of **backup and restore** in Linux (and in any operating system) is to ensure **data integrity, availability, and system recovery** in the event of failure, data loss, or corruption.

Backup:

A **backup** is a copy of important data, configurations, or even the entire system that is stored separately from the original location. Its purposes include:

- ➔ **Data Protection**: Prevent data loss from hardware failure, accidental deletion, or file corruption.
- ➔ **Disaster Recovery**: Enable recovery from catastrophic events (e.g., disk failure, ransomware).
- ➔ **System Migration**: Facilitate moving data or entire systems to new hardware or environments.
- ➔ **Versioning**: Allow recovery of earlier versions of files or configurations.

Restore:

Restoration is the process of retrieving data from a backup. The purposes include:

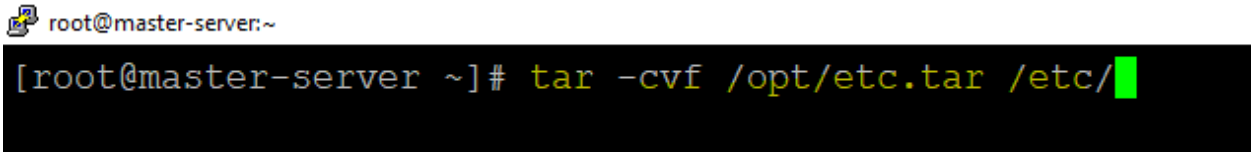
- ➔ **System Recovery**: Bring the system back to a working state after a failure or compromise.
- ➔ **Selective Recovery**: Retrieve specific files or configurations accidentally deleted or modified.
- ➔ **Testing and Validation**: Verify that backups work and can be relied upon in emergencies.

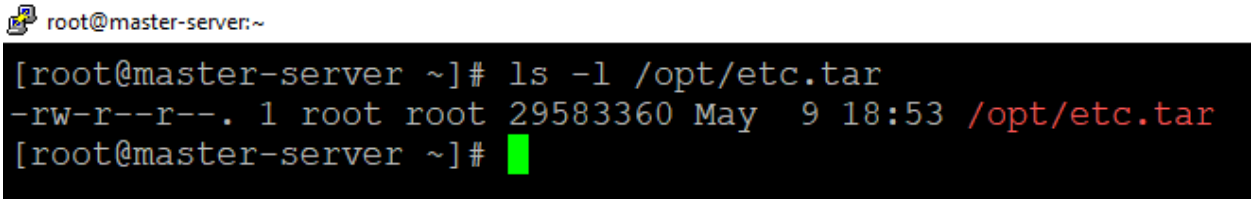
To backup the file using tar:

To backup the file using tar the syntax is

#tar –cvf <destination and name to be> < source file>

#tar –cvf /opt/etc.tar /etc





- ➔ Check the size of tar file by using du –h command
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root@master-server:~

```
[root@master-server ~]# du -sh /opt/etc.tar
29M     /opt/etc.tar
[root@master-server ~]#
```

Apply gzip on tar file and check the size.

To apply gzip on a tar file, the syntax is

#gzip <filename>

#gzip /opt/etc.tar

root@master-server:~

```
[root@master-server ~]# gzip /opt/etc.tar
[root@master-server ~]# du -sh /opt/etc.tar.gz
7.5M    /opt/etc.tar.gz
[root@master-server ~]#
```

Untar the file and check for the size of the file/directory

To untar a file the syntax is

#tar –xvf <filename>

#tar –xvf etc.tar

root@master-server:~

```
[root@master-server ~]# tar -xvf /opt/etc.tar.gz
```

root@master-server:~

```
[root@master-server ~]# du -sh /opt/etc.tar.gz
7.5M    /opt/etc.tar.gz
[root@master-server ~]#
```

==========END