

LINUX SOFTWARE MANAGEMENT - NOTES (CHEAT SHEET)

1. SOFTWARE DISTRIBUTION

- Linux software comes in packages (.deb, .rpm).
- Different distros use different systems to deliver software.
- Instead of .exe files, Linux uses package managers and repositories.

2. PACKAGE REPOSITORIES

- Online storage locations where software packages are kept.
- Linux installs software from these secure repositories.
- Similar to Play Store/App Store for Linux.

3. TAR AND GZIP

tar:

- Combines multiple files into one archive.
- Creates .tar files.

gzip:

- Compresses files to make them smaller.
- Creates .gz or .tar.gz files.

Example:

```
tar -czvf backup.tar.gz folder/
```

4. PACKAGE DEPENDENCIES

- Other required packages for a software to run.
- Missing dependencies prevent software from running.
- Modern package managers install dependencies automatically.

5. RPM AND DPKG

rpm (RedHat Package Manager):

- Used in Fedora, RedHat, CentOS.

- Works with .rpm packages.
- Example: `sudo rpm -i package.rpm`

`dpkg` (Debian Package Manager):

- Used in Ubuntu, Debian.
- Works with .deb packages.
- Example: `sudo dpkg -i package.deb`

6. YUM AND APT

YUM/DNF:

- High-level package manager for Fedora, RedHat, CentOS.
- Examples:

```
sudo yum install nginx
```

```
sudo dnf update
```

APT:

- High-level package manager for Ubuntu, Debian.
- Examples:

```
sudo apt install nginx
```

```
sudo apt update
```

7. COMPILE SOURCE CODE

- Install software manually from source.

Steps:

1. Download source code (.tar.gz)
2. Extract: `tar -xvf source.tar.gz`
3. Run:

```
./configure
```

```
make
```

```
sudo make install
```

Used when:

- Software not in repos
- Developer/custom version needed