

Compress & Decompress files

- **tar Command:**

Purpose:

tar (tape archive) is used for archiving and creating compressed or uncompressed archive files.

Syntax:

tar [OPTIONS] [FILE...]

Common Options:

-c: Create a new archive.

-x: Extract files from an archive.

-v: Verbose mode (show progress).

-f: Specify the archive file name.

Examples:

Create a Tar Archive:

tar -cvf archive.tar files/

Extract Files from Tar Archive:

tar -xvf archive.tar

- **gzip Command:**

Purpose:

gzip compresses files, reducing their size.

Syntax:

gzip [OPTIONS] FILE

Common Options:

-d: Decompress.

-r: Recursively compress files in directories.

-9: Highest compression level.

Example:

gzip myfile.txt

- **gunzip Command:**

Purpose:

gunzip is used to decompress files compressed with gzip.

Syntax:

gunzip [OPTIONS] FILE

Common Options:

-c: Write to standard output (don't delete original).

-k: Keep the original file after compression.

Example:

```
gunzip myfile.txt.gz
```

- **Combined Operations:**

Create Tar Archive and Gzip:

```
tar -czvf archive.tar.gz files/
```

Creates a compressed tar archive (archive.tar.gz) of the specified files.

Extract from Tar Archive and Gunzip:

```
tar -xzf archive.tar.gz
```

Extracts files from a compressed tar archive (archive.tar.gz).

These commands are frequently used in Linux for file compression, archiving, and decompression. They are essential for packaging and distributing files, especially when transferring large amounts of data or creating backups.

USER ACCOUNT MANAGEMENT

- **useradd Command:**

Purpose:

useradd is used to add a new user account to the system.

Syntax:

```
useradd [OPTIONS] USERNAME
```

Common Options:

-m: Create the user's home directory.

-g: Specify the initial login group.

-s: Set the user's login shell.

Example:

```
useradd -m -g users -s /bin/bash john
```

Creates a new user named "john" with a home directory, assigned to the "users" group, and using the Bash shell.

- **groupadd Command:**

Purpose:

groupadd is used to add a new group to the system.

Syntax:

groupadd [OPTIONS] GROUPNAME

Common Options:

None of the common options are frequently used.

Example:

```
groupadd developers
```

Creates a new group named "developers."

- **usermod Command:**

Purpose:

usermod is used to modify user account properties.

Syntax:

usermod [OPTIONS] USERNAME

Common Options:

-aG: Add user to supplementary groups.

-s: Change the user's login shell.

Example:

```
usermod -aG wheel john
```

Adds the user "john" to the "wheel" group.

- **userdel Command:**

Purpose:

userdel is used to delete a user account from the system.

Syntax:

userdel [OPTIONS] USERNAME

Common Options:

-r: Remove the user's home directory and mail spool.

Example:

```
userdel -r john
```

Deletes the user "john" and removes the associated home directory and mail spool.

- **groupdel Command:**

Purpose:

groupdel is used to delete a group from the system.

Syntax:

groupdel GROUPNAME

Common Options:

None of the common options are frequently used.

Example:

```
groupdel developers
```

Deletes the group named "developers."

These commands are crucial for managing user accounts and groups on a Linux system. They provide administrators with the ability to create, modify, and delete user accounts and groups as needed for effective system administration.