

# Linux Server - Linux Services and Permissions

## 1. What is a Linux service?

A Linux service is a background process that performs a specific function, like web hosting (Apache), database management (MySQL), or SSH connections.

## 2. How to check running services in Linux?

Use: `systemctl list-units --type=service --state=running`

## 3. How to start, stop, and restart a service?

- Start: `sudo systemctl start service_name`
- Stop: `sudo systemctl stop service_name`
- Restart: `sudo systemctl restart service_name`

## 4. How to enable or disable a service at boot?

- Enable: `sudo systemctl enable service_name`
- Disable: `sudo systemctl disable service_name`

## 5. What are Linux permissions?

Permissions control who can read, write, or execute a file or directory.

## 6. Types of permissions:

- Read (r): View contents of a file/directory.
- Write (w): Modify contents of a file/directory.
- Execute (x): Run a file or access a directory.

## 7. How to view file permissions?

Use: `ls -l`

## 8. How to change file permissions?

Use: `chmod`

Example: `chmod 755 file.txt`

## 9. How to change file ownership?

Use: `chown`

Example: `sudo chown user:group file.txt`

## 10. Special permissions:

- SUID: Allows a user to execute a file with the permissions of the file owner.
- SGID: Similar to SUID but for groups.
- Sticky Bit: Prevents users from deleting files in a directory they don't own.