

Linux User Management (with sudo examples)

User management in Linux includes creating, modifying, and deleting user accounts and groups, managing passwords, and assigning privileges. Below are practical root-level (sudo) examples with expected outputs.

```
$ sudo useradd -m -s /bin/bash devuser
[sudo] password for sheetal:
# (creates user with home directory /home/devuser)
```

Creates a new user 'devuser' with a home directory and bash shell. '-m' creates the home directory, '-s' sets the shell.

```
$ sudo passwd devuser
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
```

Sets the password for the user 'devuser'. Root or sudo is required to set another user's password.

```
$ id devuser
uid=1001(devuser) gid=1001(devuser) groups=1001(devuser)
```

Shows the UID, primary GID, and group memberships for the specified user.

```
$ sudo usermod -aG sudo devuser
$ groups devuser
devuser : devuser sudo
```

Adds 'devuser' to the 'sudo' group allowing it to execute commands with sudo privileges.

```
$ sudo deluser devuser
Removing user `devuser' ...
Warning: group `devuser' has no more members.
Done.
```

Deletes a user account but does not remove the home directory by default. Use '--remove-home' to delete the home directory as well.

```
$ sudo groupadd devops
$ sudo usermod -aG devops alice
$ getent group devops
devops:x:1002:alice
```

Creates a new group 'devops', adds user 'alice' to it, and shows the group entry.

```
$ sudo chown alice:devops /var/www/html
$ ls -ld /var/www/html
drwxr-xr-x 2 alice devops 4096 Oct 31 12:00 /var/www/html
```

Changes ownership of a directory to user 'alice' and group 'devops', then lists the directory showing new owner/group.

```
$ sudo passwd -l alice
Password changed.
passwd: Authentication token lock succeeded
```

Locks the user account 'alice', preventing login (useful for temporary suspension).

```
$ sudo chage -l alice
Last password change : Oct 10, 2025
Password expires : never
Password inactive : never
Account expires : never
Minimum number of days between password change : 0
Maximum number of days between password change : 99999
Number of days of warning before password expires : 7
```

Displays password aging information and account expiry details for a user.

```
$ sudo visudo
# (edits /etc/sudoers safely; example line added)
sheetal ALL=(ALL) NOPASSWD: /usr/bin/systemctl restart apache2
```

Safely edits sudoers file to grant passwordless execution of a specific command for a user. Always use visudo to avoid syntax errors.

```
$ su - devuser
Password:
$ whoami
devuser
```

Switches to another user account using 'su'. When switching to non-root user, their password is required.

```
$ sudo -l
Matching Defaults entries for sheetal on this host:
env_reset, mail_badpass
User sheetal may run the following commands on this host:
(ALL : ALL) ALL
```

Shows the sudo privileges for the current user, listing allowed commands and any restrictions.