



ondia



Linux Plus for AWS and DevOps



Managing Users and Groups



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“sudo” command



sudo Command



The sudo (superuser do) command gives some **admin privileges** to non-admin users.

When you put sudo in front of any command in terminal, that command runs with **elevated privileges**.

If you're not sure if you're using sudo or su, look at the trailing character on the command line. If it's a pound sign (#), you're logged in as root.

▶ sudo Command



Commands	Meaning
sudo -l	List available commands.
sudo command	Run command as root.
sudo -u root command	Run command as root.
sudo -u user command	Run command as user.
sudo su	Switch to the superuser account.
sudo su -	Switch to the superuser account with root's environment.
sudo su - username	Switch to the username's account with the username's environment.
sudo -s	Start a shell as root
sudo -u root -s	Same as above.
sudo -u user -s	Start a shell as user.



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Managing Users and Groups

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Basic User Commands

Basic User Commands



whoami

display one-line manual page descriptions.

whoami

```
aslan@AslanTurker:~/linuxplus$ whoami  
aslan  
aslan@AslanTurker:~/linuxplus$
```

Basic User Commands



who

provide with details about who is logged on the system.

who

```
aslan@AslanTurker:~/linuxplus$ who
root pts/0 2019-11-10 23:07 (10.104.33.101)
james pts/1 2019-11-10 23:30 (10.104.33.101)
john pts/2 2019-11-10 23:34 (10.104.33.96)
aslan pts/3 2019-11-10 23:39 (10.104.33.91)
aslan@AslanTurker:~/linuxplus$
```

Basic User Commands



w

inform who is logged on and what they are doing.

w

```
aslan@AslanTurker:~/linuxplus$ w
14:22:38 up 1:52, 0 users, load average: 0.52, 0.58, 0.59
USER TTY LOGIN@ IDLE JCPU PCPU WHAT
root pts/0 14:07 15.00s 0.01s 0.01s top
aslan@AslanTurker:~/linuxplus$
```

Basic User Commands



id

Display user id, your primary group id, and a list of the groups you belong to.

id [username]

```
aslan@AslanTurker:~/linuxplus$ id
uid=1000(aslan) gid=1000(aslan) groups=1000(aslan)
```

Basic User Commands



su

enables a shell to be run as another user.

su [username]

```
clarusway@DESKTOP-UN6T2ES:~$ su oliver
Password:
oliver@DESKTOP-UN6T2ES:/home/clarusway$ _
```

Basic User Commands



su -

To become another user and also get the environment of the target user.

su - [username]

```
aslan@AslanTurker:~/linuxplus$ su - oliver
Password:
oliver@DESKTOP-UN6T2ES:~$
```


Basic User Commands



sudo su

The root user does not have a password set on some Linux systems like Ubuntu and Xubuntu. On these Linux systems, You can become root user via sudo su command.

sudo su

sudo su -

```
aslan@AslanTurker:~/linuxplus$ sudo su
root@DESKTOP-UN6T2ES:/home/aslan #
```



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User management

User management



etc/passwd

On Linux, the local user database is /etc/passwd.

```
aslan@AslanTurker:~/linuxplus$ tail -5 /etc/passwd
aslan:x:1000:1000:,,,:/home/aslan:/bin/bash
john:x:1002:1002:john,room,work,home,other:/home/john:/bin/bash
oliver:x:1003:1003:oliver,room_1,work_1,home_1:/home/oliver:/bin/bash
aaron:x:1001:1001:aaron,,,:/home/aaron:/bin/bash
james:x:1005:1009:james,,,:/home/james:/bin/bash
aslan@AslanTurker:~/linuxplus$
```



useradd

useradd command is used for creating a new user.

useradd [username]

```
root@DESKTOP-UN6T2ES:~# useradd -m -d /home/walter -c "walter aslan " walter
root@DESKTOP-UN6T2ES:~# tail -1 /etc/passwd
walter:x:1006:1006:walter aslan :/home/walter:/bin/sh
root@DESKTOP-UN6T2ES:~# _
```

- m is used for forcing the creation of the home directory
- d is used for setting the name of the home directory
- c is used for setting a description

User management



adduser

adduser is not a standard Linux command. It's basically a Perl script that uses the useradd command in the background. This is more effective at creating new users on Linux.

adduser [useradd]

```
root@DESKTOP-UN6T2ES:~# adduser raymond
Adding user `raymond' ...
Adding new group `raymond' (1004) ...
Adding new user `raymond' (1004) with group `raymond' ...
Creating home directory `/home/raymond' ...
Copying files from `/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for raymond
Enter the new value, or press ENTER for the default
    Full Name []: Raymond aslan
    Room Number []: it
    Work Phone []: 12345
    Home Phone []: 12345
    Other []: -
Is the information correct? [Y/n] y
root@DESKTOP-UN6T2ES:~#
```

User management



userdel

Delete a user. `userdel` command will not remove the user's home directory from the file system. If you want to remove the home directory, you need to use the `-r` in the command line.

`userdel [username]`

```
root@DESKTOP-UN6T2ES:~# userdel -r raymond
```



usermod

Modify a user's properties. The example below modifies the description of the user walter.

usermod -[option][value][username]

```
root@DESKTOP-UN6T2ES:~# tail -1 /etc/passwd
walter:x:1004:1004:walter aslan :/home/walter:/bin/sh
root@DESKTOP-UN6T2ES:~# usermod -c 'aws solution architect' walter
root@DESKTOP-UN6T2ES:~# tail -1 /etc/passwd
walter:x:1004:1004:aws solution architect:/home/walter:/bin/sh
root@DESKTOP-UN6T2ES:~#
```



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User Passwords

User Passwords



passwd

User passwords can be set with the passwd command.

passwd [username]

```
oliver@DESKTOP-UN6T2ES:~$ passwd
Changing password for oliver.
(current) UNIX password:
Enter new UNIX password:
Retype new UNIX password:
Bad: new password is too simple
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
oliver@DESKTOP-UN6T2ES:~$
```

User Passwords



etc/shadow

User passwords are encrypted and stored in /etc/shadow file.
The /etc/shadow file is only read and can be accessed by root only.

```
aslan @DESKTOP-UN6T2ES:~$ tail -4 /etc/shadow
tail: cannot open '/etc/shadow' for reading: Permission denied
aslan @DESKTOP-UN6T2ES:~$ sudo su -
root@DESKTOP-UN6T2ES:~# tail -4 /etc/shadow
aslan:$y$j9T$W52ihkfs29ipcBBM3.EhK.$Uv.TUx1QGjqZfM1hiB6ghUY3.1cLD6vkjrxfxnSdvxg9:20118:0:99999:7:::

john:$6$ITd.yBmK$MxMz9wm7.1DxdQx7At.0VB6ch1XU22BMXhTbPkWjdk0B
.SmwnjYR922DmCeAzP8WFyIhGoHP10Dqt6MO7rxON0:18333:0:99999:7:::
oliver:$6$tTRbLfc5$j1NMBc9tvBotwCtFMt0Qq2K0nbQW2zBv
/zwufBwOnhUs7UMoczD.m/5Tnz1uCKymhISOSzZbdSCRKkLF.wSD00:18333:0
:99999:7:::
walter:$6$aMR4T5iB$7ZJzvy2VCEaOnPZIbaofUSLQp
.aeIOCZgDeNug5hWcIkSnAjA6n6V.tR3IAJY5IScImcn15K/ZMFug1D2gK6L
/:18333:0:99999:7:::
root@DESKTOP-UN6T2ES:~#
```

User Passwords



etc/login.defs

The /etc/login.defs file includes some default user password settings, such as password aging and length settings.

```
aslan @DESKTOP-UN6T2ES:~$ grep ^PASS /etc/login.defs
PASS_MAX_DAYS    99999
PASS_MIN_DAYS    0
PASS_WARN_AGE    7
aslan @DESKTOP-UN6T2ES:~$
```



Exercise



Create a user named **devops**

Set **devops** user password as **ondia**

Change devops user description as **the best cloud engineer**

Switch to **devops** user

Display information of **devops** user

Go back to previous user

Delete **devops** user with home directory



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Group Management

Group Management



etc/group

Users can belong to several groups. Group membership is specified via the /etc/group file.

```
root@DESKTOP-UN6T2ES:/home/aslan # tail -3 /etc/group
linux:x:1006:john,james,aaron
aws:x:1007:walter
python:x:1008:oliver
root@DESKTOP-UN6T2ES:/home/aslan #
```



groups

groups command is used to display a list of groups to which the user belongs.

groups [username]

```
john@DESKTOP-UN6T2ES:~$ groups
john linux
john@DESKTOP-UN6T2ES:~$
```

Group Management



groupadd

groupadd command is used to create a new group.

groupadd [groupname]

```
root@DESKTOP-UN6T2ES:~# groupadd linux
root@DESKTOP-UN6T2ES:~# groupadd aws
root@DESKTOP-UN6T2ES:~# groupadd python
```


Group Management



usermod

You can change group membership with the usermod command.

usermod -a -G [groupname][username]

```
root@DESKTOP-UN6T2ES:~# usermod -a -G linux james
root@DESKTOP-UN6T2ES:~# usermod -a -G linux aaron
```

- By default, if the group is not specified in the command, the usermod command **will remove the user from any group!**
- Using the **-a** (append) option **prevents this behaviour.**

Group Management



groupmod

groupmod command can be used to change the group name.

groupmod -n [newname] [oldname]

```
root@DESKTOP-UN6T2ES:~# groupmod -n ubuntu linux
root@DESKTOP-UN6T2ES:~# tail -3 /etc/group
aws:x:1007:walter
python:x:1008:oliver
ubuntu:x:1006:john,james,aaron
root@DESKTOP-UN6T2ES:~#
```

Group Management



groupdel

groupdel command is used to delete a group.

groupdel [groupname]

```
root@DESKTOP-UN6T2ES:~# groupdel ubuntu
root@DESKTOP-UN6T2ES:~#
```

▶ Group Management



gpasswd

With the gpasswd command, we can add a user to a group and to remove a user from a group. In the example below:

- We add john to aws group with gpasswd -a command.
- We remove walter from aws group with gpasswd -d command.

gpasswd -[option][username][groupname]

```
root@DESKTOP-UN6T2ES:~# gpasswd -a john aws
Adding user john to group aws
root@DESKTOP-UN6T2ES:~# gpasswd -d walter aws
Removing user walter from group aws
root@DESKTOP-UN6T2ES:~#
```



Exercise



Create a user named **devops**

Create two groups named **cloud** and **aws**

Add **devops** user to the group **cloud**

Display **groups** that **devops** user belongs to

Add **devops** user to the group **aws**

Remove **devops** user from **cloud** group

Delete **cloud** group

Rename **aws** group name as **aws-cloud**

Display **groups** that **devops** user belongs to



Kahoot!



Exercise



Create users: **Jason, Bruce, Victor, Mark, Jack, Tyler, Tomy, Edward, Eric**

Create groups: **Asia, Europe, America, Africa**

Add users: **Jason, Bruce, Victor** to the **Asia** group

Add users: **Jason, Mark, Jack, Tyler** to the **Europe** group

Add users: **Jason, Tomy, Edward** to the **America** group

Add users: **Jason, Bruce, Mark, Edward, Jack, Tyler, Eric** to the **Africa** group

Display groups that **Jason** belongs to;

Display groups that **Edward** belongs to

Remove **Bruce** from **Africa** group;

Remove **Jason** from **all** groups

Delete **Europe** group

Rename **Africa** group as Australia

THANKS!

Any questions?

