



ondia

The logo for 'ondia' is centered on a white background. The word is written in a lowercase, rounded sans-serif font. The letters 'o', 'n', and 'd' are a medium purple color, while 'i' and 'a' are a darker blue. A decorative graphic element, consisting of overlapping light blue and teal shapes, is positioned behind the 'd'. The entire composition is framed by four purple triangular shapes in the corners.



Linux Plus for AWS and DevOps



* 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.



1

Managing Users and Groups

Table of Contents



- ▶ **Basic User Commands**
- ▶ **User Management**
- ▶ **User Passwords**
- ▶ **Group Management**



2

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 #
```



3

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:~#
```



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:~#
```



4

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
.SmnpjYR922DmCeAzP8WFyIhGoHP10Dqt6M07rxON0:18333:0:99999:7:::
oliver:$6$tTRbLfc5$j1NMBc9tvBotwCtFMt0Qq2K0nbQW2zBv
/zwufBwOnhUs7UMoczD.m/5Tnz1uCKymhIS0SszZbdSCRKkLF.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 **clarusway**

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



5

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:~$
```



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
```



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.**



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:~#
```




groupdel

groupdel command is used to delete a group.

groupdel [groupname]

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



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

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?

