

## Sudo and the sudoers file

sudo is a program that allows users to run programs on behalf of another users . typically the super user or that we called in the linux environment “root” .and it can be configured with a file called sudoers file that determine what access will be granted of a specific user. To make some changes or modify the sudoers file you need super users privileges. Sudoers file is a very sensitive file one misconfiguration can be very dangerous and that can havily affected the system or the server that you care using.thats why we do not use the normal editor like vim nano or emacs for editing the file we use and special editor called ‘visudo’ this editor is use for editing the sudoers file and it helps to not make error in the sudoers file

to modigy sidoers file first you need to be root otherwise you cant edit the file

=>su root

the file is located in /etc/sudoers

this command in root user automaticaly takes you there

=>visudo

there are a lot of configuration in the sudoers file and we particularly see the

```
## allow root to run any commands anywhere
root    ALL=(ALL)  ALL
```

the syntax

<user> <host>=<Users running the sudo command> <command >

with that syntax it means that

anybody that can any command with the user root anywhere if the password of the root is correct

lets add a user for in the sudoers file

```
## allow root to run any commands anywhere
root    ALL=(ALL)  ALL
tanvir  ALL=(ALL)  ALL
```

[remember to use tab instead of space .if you give space its not going to work]

so after the change to make it effect issue this commands

=>exec bash

then we switched to the user tanvir

```
=>su tanvir
```

and then we issue the commands

```
=>sudo visudo
```

```
=>[password for tanvir]
```

we can see that we are in the sudoers file

for security we want that some users can do things with the password and we let some user can issue some command without the password

we can also configure this thing in the sudoers file .lets ulet the user tanvir issue “fdisk” command with sudo with out using any password

the commnad syntax is

```
<user> <host>=NOPASSWD: <program location >
```

```
tanvir ALL=NOPASSWD: /sbin/fdisk
```

after saving it we use the command

```
=> exec bash
```

to make change in effect and now if we use the commands

```
=>sudo fdisk
```

we will see that it system does not ask for password this time

the program sudo also provides some other functionality .It actually records every commands that you are running on sudo

to see that lets see the secure log file

```
=> sudo tail -f /var/log/secure
```

we can see that every single command that is used with sudo is logged.

Sometimes regular users need elevated privileges to do some work for example install a packages so by using the sudo it gives a password prompt and after providing it the user can do things in elevated privileges.

In the enterprise level its a good practice to use administrative things with the sudo command.Thats why UBUNTU like system dont let you register the user account during the setup .if you want to do something then you have to use the sudo command to do that.because Linux system in less

forgiving if you directly use the root user and accidentally do something wrong the system can crush .