A SIMPLE WAY TO LEARN AS A DEVOPS ENGINEER BY READING WORKING WITH

Useradd, userdel, chage, passwd, redirection, touch, … cmd

This document is share with you by s5willy.

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You are working for a company called Ek_software solution. And they just hire 2 employees at the devOps department. You are asked by manager to do the following task.

Scenario1: onboarding

1- Create a group on the server called teamdevops then give the admin privileges to that group.

Run these Linux command

→ sudo groupadd teamdevops

```
teamdevops:x:3163:
```

```
Check if it's done with this syntax: cat /etc/group |grep teamdevops
```

→ sudo visudo

A - Search for the line: # Members of the admin group may gain root privileges

B – Add a line under the lines of that paragraph of the following syntax:
%teamdevops ALL=(ALL) ALL

C – Save and quit: wq!

```
Check if it's done with this syntax: sudo group teamdevops
(do this only when you have added users in the group teamdevops)
```

```
teamdevops:x:3163:devopsA,devopsB
```

As you can realize, the admin provileges is given
to the group teamdevops which has devopsA and devopsB as members.

2- Can you explain why you are asked to give admin privileges to the group called teamdevops ?

- To delegate certain system-level tasks to specific users (devopsA and devopsB).

- This allows for centralized management and reduces the risk of errors or security breaches caused by individual users performing administrative tasks without proper oversight or training.

- To allow the system administrator (teamdevops) to control who could perform tasks that require superuser privileges (devopsA and devopsB), such as installing software, modifying system configurations, or accessing sensitive data.

- To simplify the management of large systems, as the administrator only needs to add or remove users from the group called **teamdevops** to change who has administrative rights, rather than modifying the individual user accounts.

The users (devopsA and devopsB) with administrative privileges should be trained on security best practices and the proper use of the privileges to reduce the risk of security breaches or accidental damage to the system.

3- Onboard the 2 users (devopsA and devopsB).

Run these Linux command

→ sudo useradd devopsA

```
sudo useradd –md /home/s5willy/devopsA devopsA (with
user + directory with on linux command)
```

→ sudo useradd devopsB

```
sudo useradd –md /home/s5willy/devopsB devopsB (with
user + directory with on linux command)
```

4- Add **devopsA** and **devopsB** in the group ‘teamdevops’

Run these Linus command

→ sudo usermod -aG teamdevops devopsA

→ sudo usermod -aG teamdevops devopsB

Go back to question #1

Check if it's done with this syntax: sudo group teamdevops
(do this only when you have added users in the group teamdevops)

```
teamdevops:x:3163:devopsA,devopsB
```

As you can realize, the admin provileges is given
to the group teamdevops which has devopsA and devopsB as members.

5- Create the password of devopsA and devopsB

Run these Linux command

→ sudo passwd devopsA

```
Your username:~$ sudo passwd devopsA
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
```

→ sudo passwd devopsB

```
Your username:~$ sudo passwd devopsB
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
```

6- Create the file called employee_info.txt

Run this Linux command

```
→ sudo cat /etc/passwd |grep devopsA >> employee_info.txt
→ sudo cat /etc/passwd |grep devopsB >> employee_info.txt
```

Check if it's well done by doing as follow:

```
Your username:~$ cat employee_info.txt
     devopsB:x:1754:1754::/home/s5willy/devopsB/:/bin/bash
     devopsA:x:1753:1753::/home/s5willy/devopsA/:/bin/bash
```

7- The user **devopsA** want to create a file called myfile.txt in the username **devopsB** directory, can you give him access to

A – Check the permissions the directory devopsA and devopsB have on the file employee_info.txt

Run this Linux command

→ ls -l

Check if it's well done:

Your username:~$

```
drwxr-xr-x  2 devopsA devopsA 4096 Feb  1 23:24 devospA
drwxr-xr-x  2 devopsB devopsB 4096 Feb  1 23:24 devospB
```

As a users, devopsA and devopsB have the only permission to read and execute(5pts) inside their respective group.

B – You need to put devopsA in the group devopsB.

Run this Linux command:

→ sudo usermod –aG devopsB devopsA

Check if it's well done:

```
Your username: ~$ sudo cat /etc/group |grep devopsB
devopsteam:x:3172:devopsA,devopsB
devopsB:x:1754:devopsA
```

C – Give the permission to entire group to write inside the directory devopsB

Run this Linux command:

→ sudo chmod 775 devopsB

Check if it's well done:

→ Run this Linux command: ls –l

```
drwxrwxr–x  2 devopsB devopsB 4096 Feb  1 23:24 devopsB
```

D – Help devopsA to create the myfile.txt in the devopsB directory

Step One: switch user: admin (your username) to devopsA

Run this Linux command: su devopsA

Check if it's well done:

→ Run this Linux command: whoami

devopsA

Step Two: change directory

Run this Linux command: cd /home/s5willy/devopsB

Check if it's well done:

→ Run this Linux command: pwd

/home/yourprefername/devopsB

Step three: create the file myfile.txt

Run this Linux command: sudo touch myfile.txt

Check if it's well done:

→ Run this Linux command: ls

myfile.txt

Scenario2: troubleshooting

An new employee just reach out to you and complained that he doesn't have access or he can login to the server. can you troubleshoot this issue. The username is **test1**

1- Check if the user test1 exist.

Option #1:

Run this Linux command: id test1

Outcome:

id: 'test1': no such user

Option #2:

Run this Linux command: sudo cat /etc/passwd |grep test1

Outcome:

```
[sudo] password for yourprefername:
yourusername:~$
Conclusion user doesn't exist.
```

Solution:

a. creation of the user test1

   Run this Linux command:

   sudo useradd –md /home/s5willy/test1 test1

b. Create password of test1

   Run this Linux command:

   Sudo passwd test1

c. Login as test1

   Run this Linux command:

   Su test1

d. Modify username test1 to easyL

   Run this Linux command:

   sudo usermod -l easyL test1

   Run this Linux command:

   ```
   sudo usermod –md /home/s5willy/easyL easyL
   ```

There are other employees complaining that they login to the server before but now it's now working try to solve this issue their username are:

1- id
2- sudo cat /etc/passwd
3- passwd -S username
4- sudo cat /etc/shadow |grep username
5- `sudo chage easyL (renew information)`

Scenario3: new employee got fired

You just received the sad news that the new employee just got fired and your manager ask you to delete The following account and group on the server: devops1, devops2, easyl and the group devOpsTeam.

1- Sudo groupdel [group name]
2- Userdel [username]