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RHCSA II Day 3

1. How do you edit the current user's crontab?

crontab -e

2. How do you list scheduled cron jobs for the current user?

crontab -l

3. How do you delete all cron jobs for the current user?

crontab -r

```
Options:
 -u <user>  define user
 -e         edit user's crontab
 -l         list user's crontab
 -r         delete user's crontab
 -i         prompt before deleting
 -n <host>  set host in cluster to run users' crontabs
 -c         get host in cluster to run users' crontabs
 -T <file>  test a crontab file syntax
 -s         selinux context
 -V         print version and exit
 -x <mask>  enable debugging

Default operation is replace, per 1003.2
seif@172:~$ crontab -e
no crontab for seif - using an empty one
crontab: no changes made to crontab
seif@172:~$ crontab -l
no crontab for seif
seif@172:~$ crontab -r
no crontab for seif
seif@172:~$
```

4. Cron Syntax Questions

     a. Schedule a job to run every day at 3:30 AM

```
seif@172:~$ crontab -e
no crontab for seif - using an empty one
crontab: installing new crontab
seif@172:~$ crontab -l
30 3 * * * echo "Seif Hendawy DevOps Engineer"
seif@172:~$
```

b. Run a script every Monday at 5:15 PM

```
seif@172:~$ crontab -r
Backup of seif's previous crontab saved to /home/seif/.cache/crontab/crontab.bak
seif@172:~$ crontab -e
no crontab for seif - using an empty one
crontab: installing new crontab
seif@172:~$ crontab -l
15 17 * * 1 cat /etc/passwd
seif@172:~$
```

c. Execute a command every 10 minutes

```
seif@172:~$ crontab -e
crontab: installing new crontab
Backup of seif's previous crontab saved to /home/seif/.cache/crontab/crontab.bak
seif@172:~$ crontab -l
*/10 * * * * cat /etc/passwd
seif@172:~$
```

d. Schedule a task to run every weekday (Mon-Fri) at 6:30 PM

```
seif@172:~$ crontab -e
crontab: installing new crontab
Backup of seif's previous crontab saved to /home/seif/.cache/crontab/crontab.bak
seif@172:~$ crontab -l
30 18 * * 1-5 cat /etc/passwd
seif@172:~$
```

e. Run a job on the 1st and 15th of each month at 8:00 AM

```
seif@172:~$ crontab -e
crontab: installing new crontab
Backup of seif's previous crontab saved to /home/seif/.cache/crontab/crontab.bak
seif@172:~$ crontab -l
0 8 1,15 * * cat /etc/passwd
seif@172:~$
```

5. How do you restrict users from using cron?
We put the user name in /etc/cron.deny
echo seif >> /etc/cron.deny

6. Set USerID
   a. Create File and Set Execution and setuid permission
   b. Check if setuid is enabled on File

```
seif@172:~$ ls
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  tmrw.txt  Videos
seif@172:~$ ls -l tmrw.txt
-rw-r--r--. 1 seif seif 102 Mar 27 15:18 tmrw.txt
seif@172:~$ chmod u+s y
chmod: cannot access 'y': No such file or directory
seif@172:~$ chmod u+s tmrw.txt
seif@172:~$ ls -l tmrw.txt
-rwSr--r--. 1 seif seif 102 Mar 27 15:18 tmrw.txt
seif@172:~$ 
```

7. SetGroupID
   a. Create directory testdir and set setgid
   b. Check if setgid is enabled on directory
   c. Logout and login as root
   d. Create testfile in testdir and verify ownership

```
seif@172:~/Documents$ mkdir testdir
seif@172:~/Documents$ chmod g+s testdir
seif@172:~/Documents$ ls -ld testdir/
drwxr-sr-x. 2 seif seif 6 Mar 27 18:53 testdir/
seif@172:~/Documents$ su root
Password:
root@172:/home/seif/Documents# touch testdir/testfile
root@172:/home/seif/Documents# ls -l testdir/testfile
-rw-r--r--. 1 root seif 0 Mar 27 18:53 testdir/testfile
root@172:/home/seif/Documents# 
```

8. Stick bit
      a. Create public directory dir1 with sticky bit
      b. Check if sticky bit is enabled on directory
      c. Logout and login as user1
      d. Create userfile1 in dir1
      e. Login as user2 and attempt to remove userfile1

```
seif@172:~/Documents$ chmod +t dir1/
seif@172:~/Documents$ ls -ld dir1/
drwxrwxrwt. 2 seif seif 6 Mar 27 19:08 dir1/
seif@172:~/Documents$ su user1
Password:
user1@172:/home/seif/Documents$ touch dir1/userfile1
user1@172:/home/seif/Documents$ ls -l dir1/userfile1
-rw-r--r--. 1 user1 user1 0 Mar 27 19:09 dir1/userfile1
user1@172:/home/seif/Documents$ su user2
Password:
user2@172:/home/seif/Documents$ rm dir1/userfile1
rm: remove write-protected regular empty file 'dir1/userfile1'? y
rm: cannot remove 'dir1/userfile1': Operation not permitted
user2@172:/home/seif/Documents$ ▯
```

9. Give user john read and write permissions on myfile.txt
10. How to view the ACL of a file named myfile.txt?

```
seif@172:~/Documents$ touch myfile.txt
seif@172:~/Documents$ sudo setfacl -m u:john:rw myfile.txt
seif@172:~/Documents$ getfacl myfile.txt
# file: myfile.txt
# owner: seif
# group: seif
user::rw-
user:john:rw-
group::r--
mask::rw-
other::r--
```

11. How do you give the group developers execute permissions on the directory /home/user/documents

```
seif@172:~/Documents$ sudo groupadd developers
seif@172:~/Documents$ sudo setfacl -m g:developers:x /home/seif/Documents/
seif@172:~/Documents$ getfacl /home/seif/Documents/
getfacl: Removing leading '/' from absolute path names
# file: home/seif/Documents/
# owner: seif
# group: seif
user::rwx
group::rwx
group:developers:--x
mask::rwx
other::rwx
```

12. How to remove the ACL entry for the user john on the file file1.txt?

```
seif@172:~/Documents$ sudo setfacl -x u:john file1.txt
setfacl: file1.txt: No such file or directory
seif@172:~/Documents$ ls
myfile.txt
seif@172:~/Documents$ sudo setfacl -x u:john myfile.txt
seif@172:~/Documents$ getfacl myfile.txt
# file: myfile.txt
# owner: seif
# group: seif
user::rw-
group::r--
mask::r--
other::r--
```

13. How do you set a default ACL for a directory so that all new files and directories created inside it inherit the same permissions?

```
seif@172:~/Documents$ sudo setfacl -d -m g:developers:rwx /home/seif/Documents/
seif@172:~/Documents$ getfacl /home/seif/Documents/
getfacl: Removing leading '/' from absolute path names
# file: home/seif/Documents/
# owner: seif
# group: seif
user::rwx
group::rwx
group:developers:--x
mask::rwx
other::rwx
default:user::rwx
default:group::rwx
default:group:developers:rwx
default:mask::rwx
default:other::rwx
```

14. Allow group developers to read all files in ~/Music recursively

```
seif@172:~$ ls
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  tmrw.txt
seif@172:~$ sudo setfacl -R -m g:developers:r ~/Music
seif@172:~$ getfacl ~/Music
getfacl: Removing leading '/' from absolute path names
# file: home/seif/Music
# owner: seif
# group: seif
user::rwx
group::r-x
group:developers:r--
mask::r-x
other::r-x
```

15. How to remove all ACLs from the file file1.txt and revert to the standard Unix Permissions?

```
seif@172:~$ sudo setfacl -b Documents/myfile.txt
seif@172:~$ getfacl /home/seif/Documents/myfile.txt
getfacl: Removing leading '/' from absolute path names
# file: home/seif/Documents/myfile.txt
# owner: seif
# group: seif
user::rw-
group::r--
other::r--
```

16. Set a mask on myfile.txt to limit all non-owners to r--.

```
seif@172:~/Documents$ sudo chmod 640 myfile.txt
seif@172:~/Documents$ ls myfile.txt
myfile.txt
seif@172:~/Documents$ ls -l myfile.txt
-rw-r-----. 1 seif seif 0 Mar 27 19:13 myfile.txt
seif@172:~/Documents$ 
```

17. How would you allow user 'alice' to run only the 'yum' command as root?

We edit sudoers file visudo

And add this line

alice ALL=(ALL) NOPASSWD: /usr/bin/yum

18. How would you allow a group 'developers' to run any command as root without a Password?

We edit sudoers file visudo

And add this line

%developers ALL=(ALL) NOPASSWD: ALL