Université: Institut Universitaire des Sciences (IUS)

Faculté: Sciences Informatiques

TD N°4 –: Systèmes

Nom & Prénom: SAINT-JEAN Marc-Evenort

Professeur: Imaël SAINT AMOUR

Niveau: 3ème Année

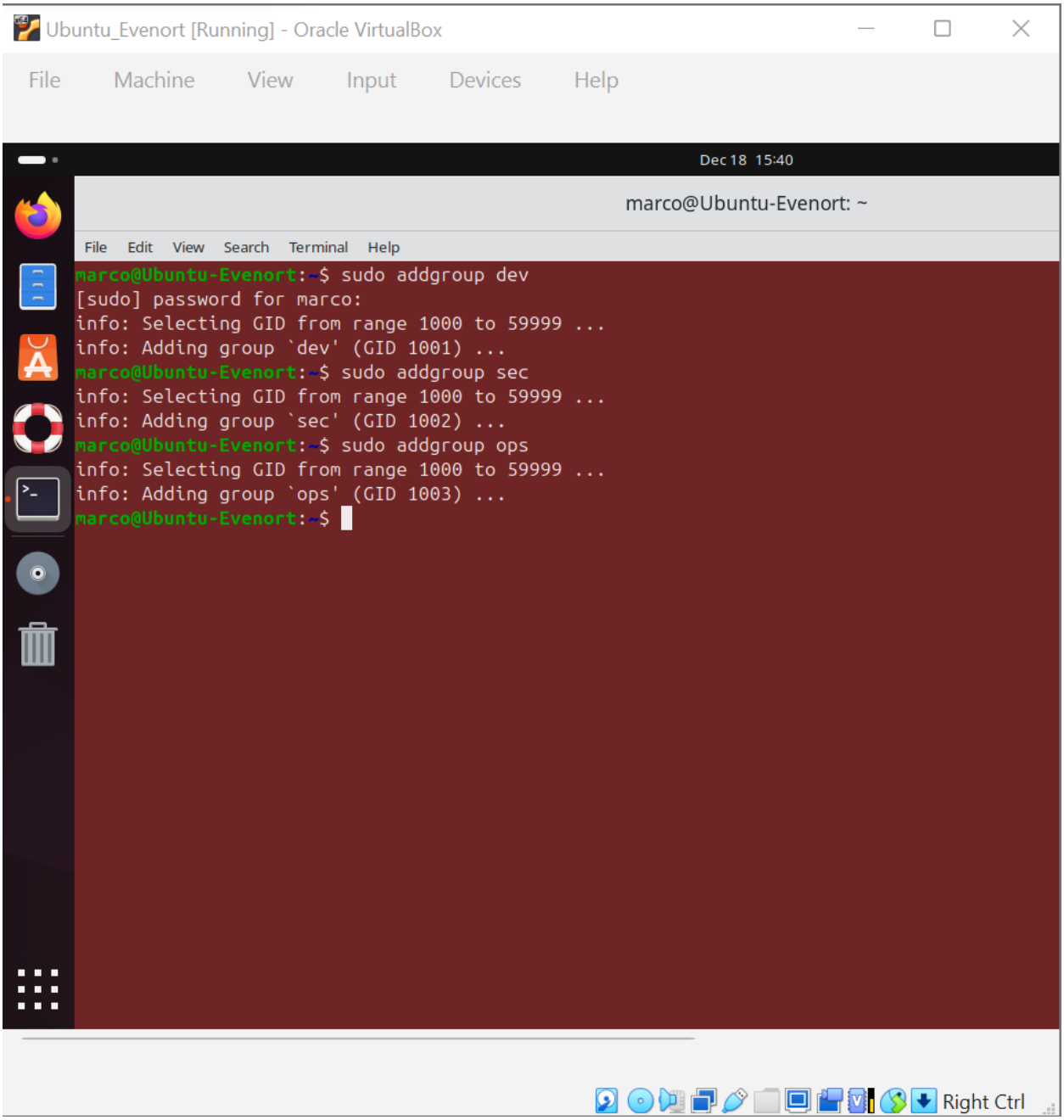
Date: le 21/Décembre/2025

Objectif de TD

L'objectif de ce TD est:

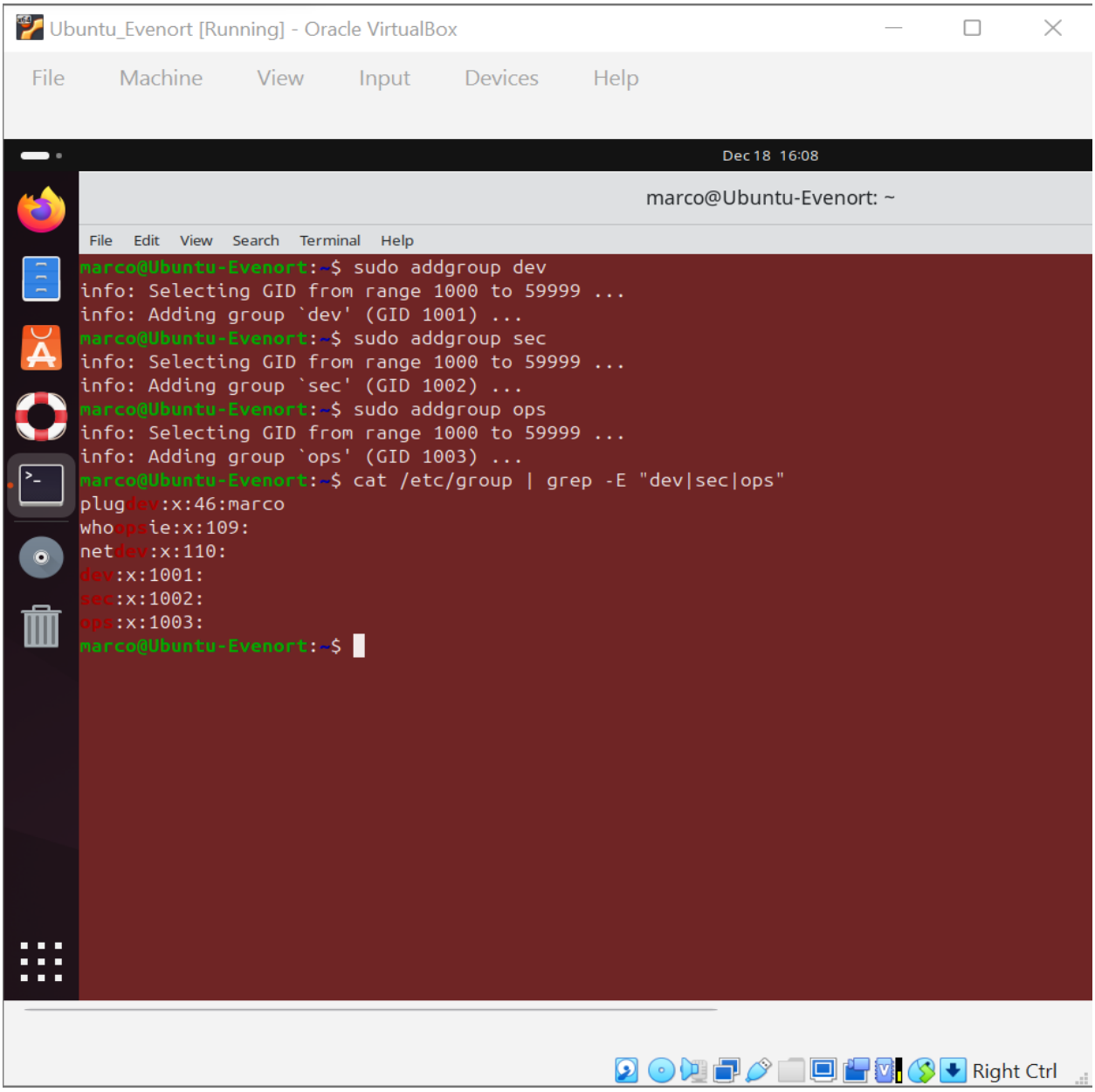
1- De mettre en place une politique de sécurité Linux pour un serveur de fichiers organisé par départements.
2- De créer les groupes et utilisateurs, de structurer l'arborescence des répertoires
3- De configurer les permissions afin d'assurer l'isolement des équipes.
4- Une collaboration contrôlée, en utilisant les permissions Linux, le SGID**,** le Sticky bit et les ACL**.**

1. Création des groupes



- Sur cette image, j'ai crée les groupes (dev,sec et ops)

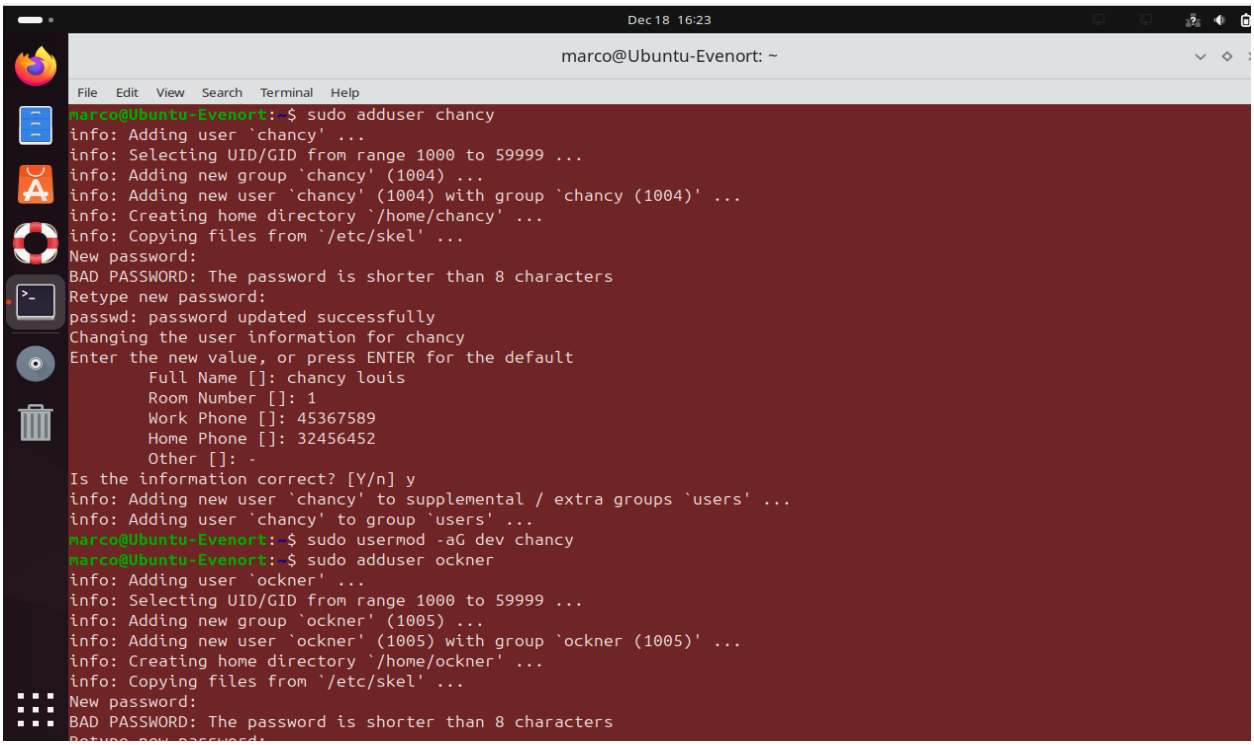
- **Vérification:**

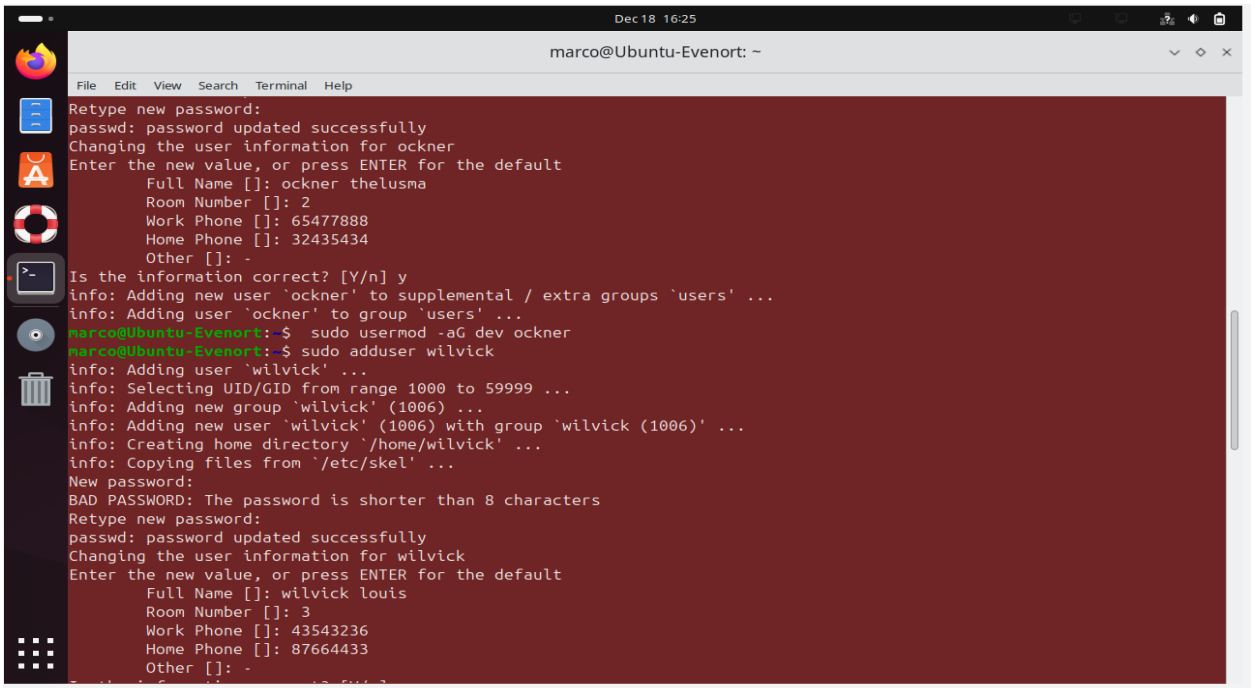


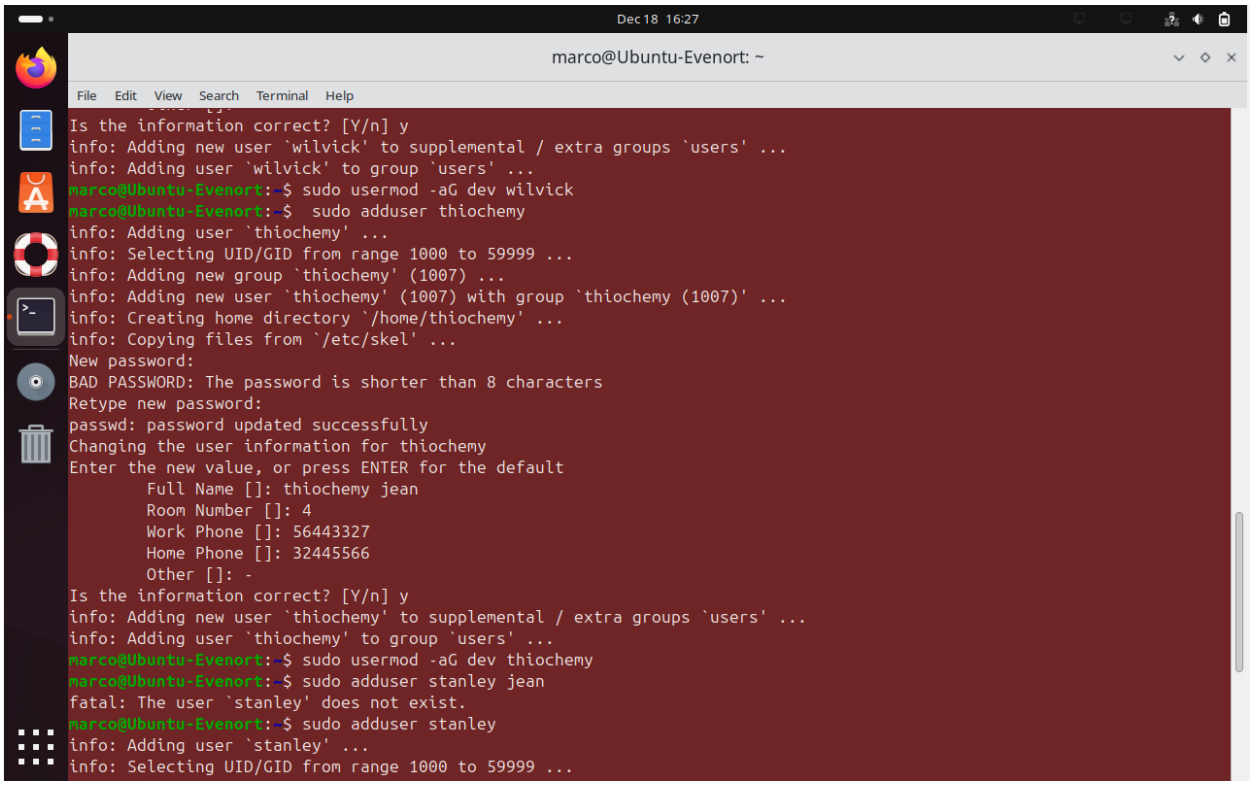
- Sur cette image, j'ai crée les groupes (dev,sec et ops) puis j'ai utilise la commande **cat /etc/group** pour lister le contenir.

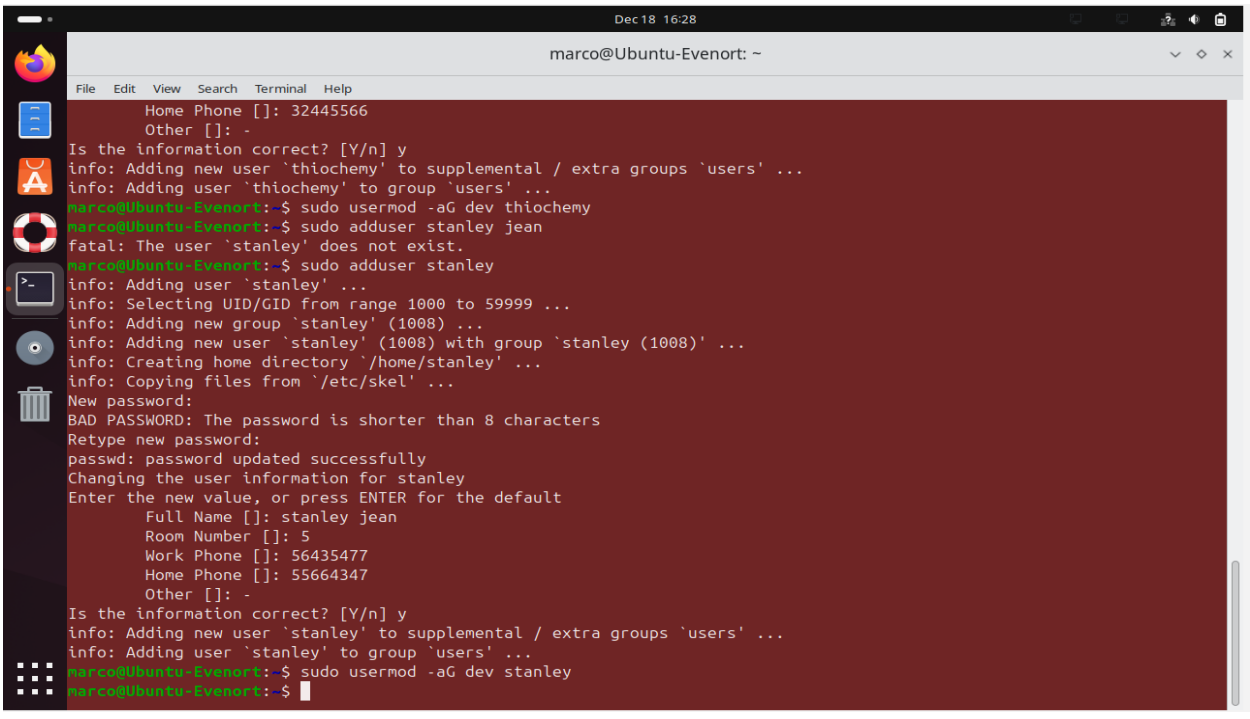
2. J’ai Crée les 15 utilisateurs

a) En ajoutant dans les groups



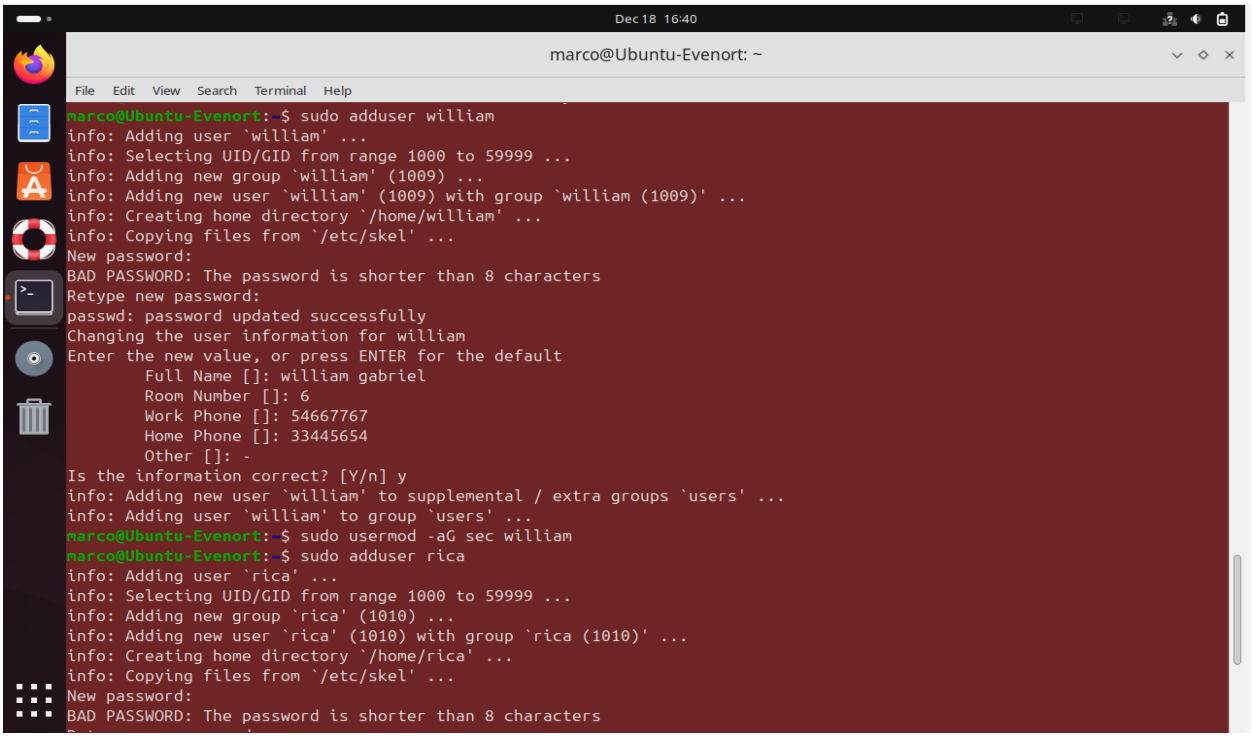


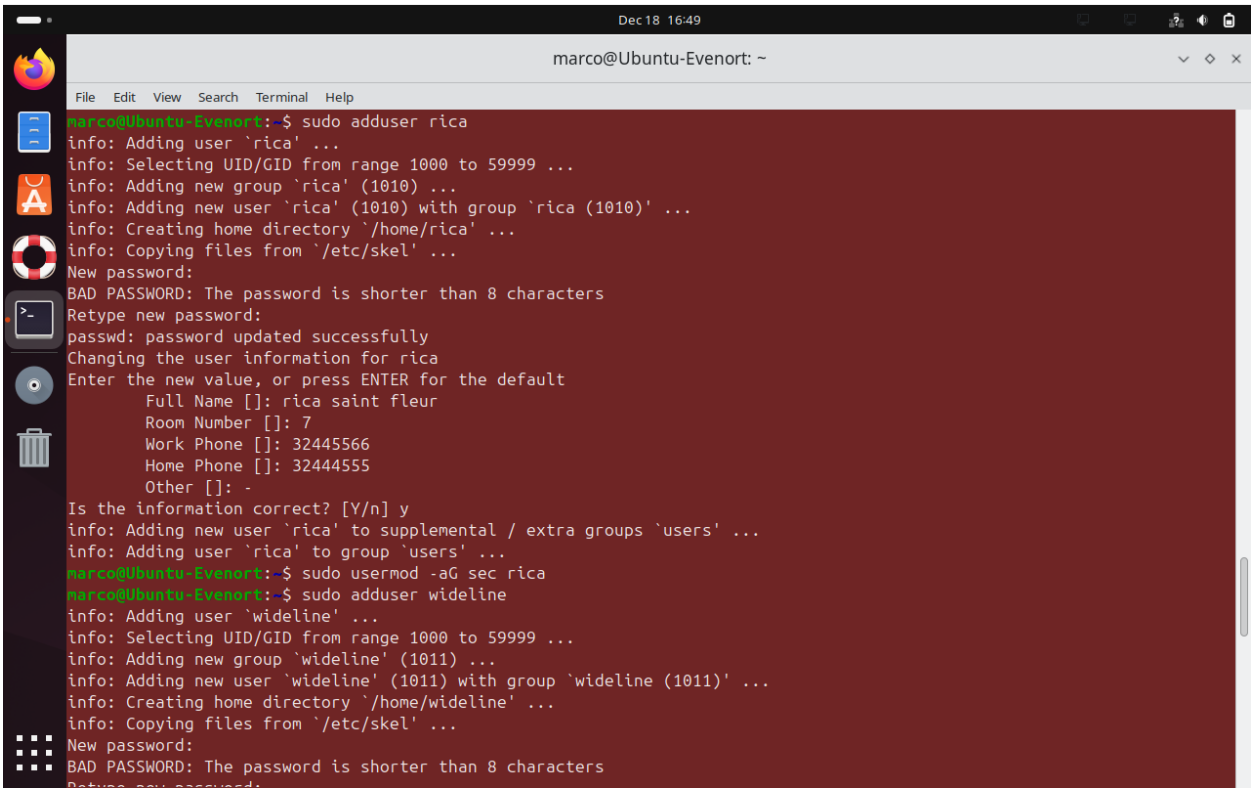


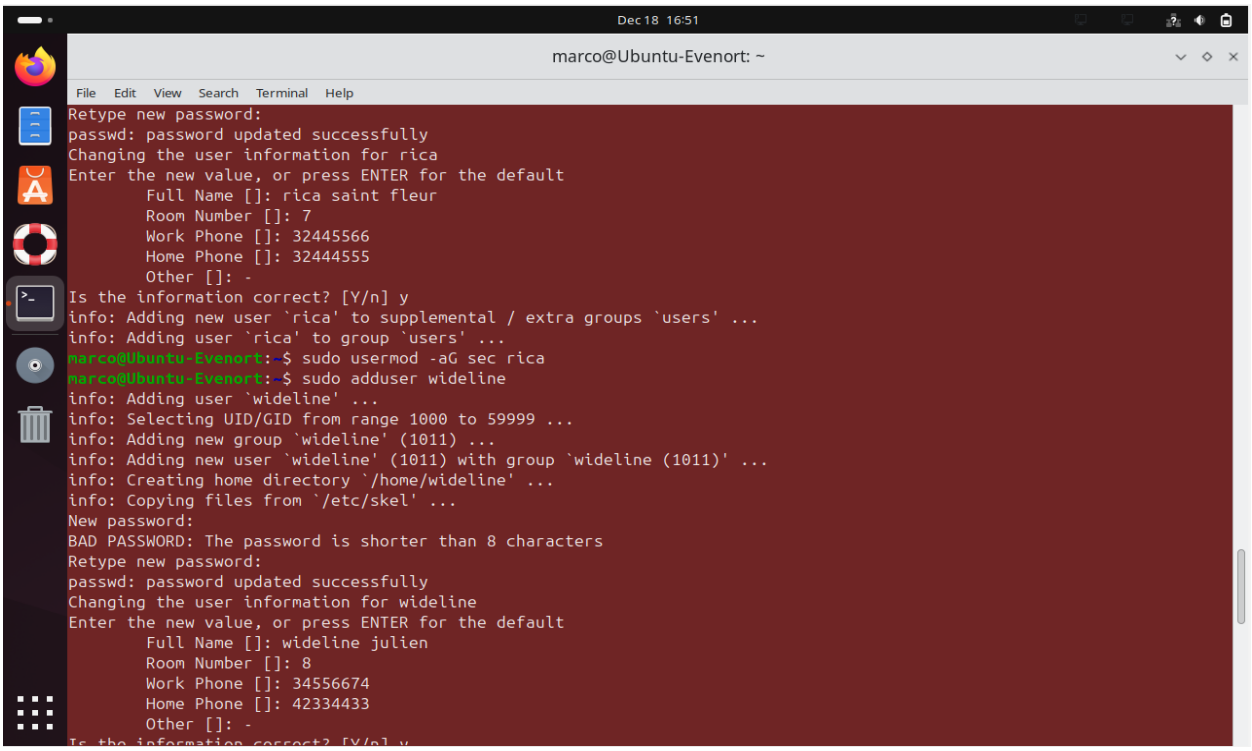


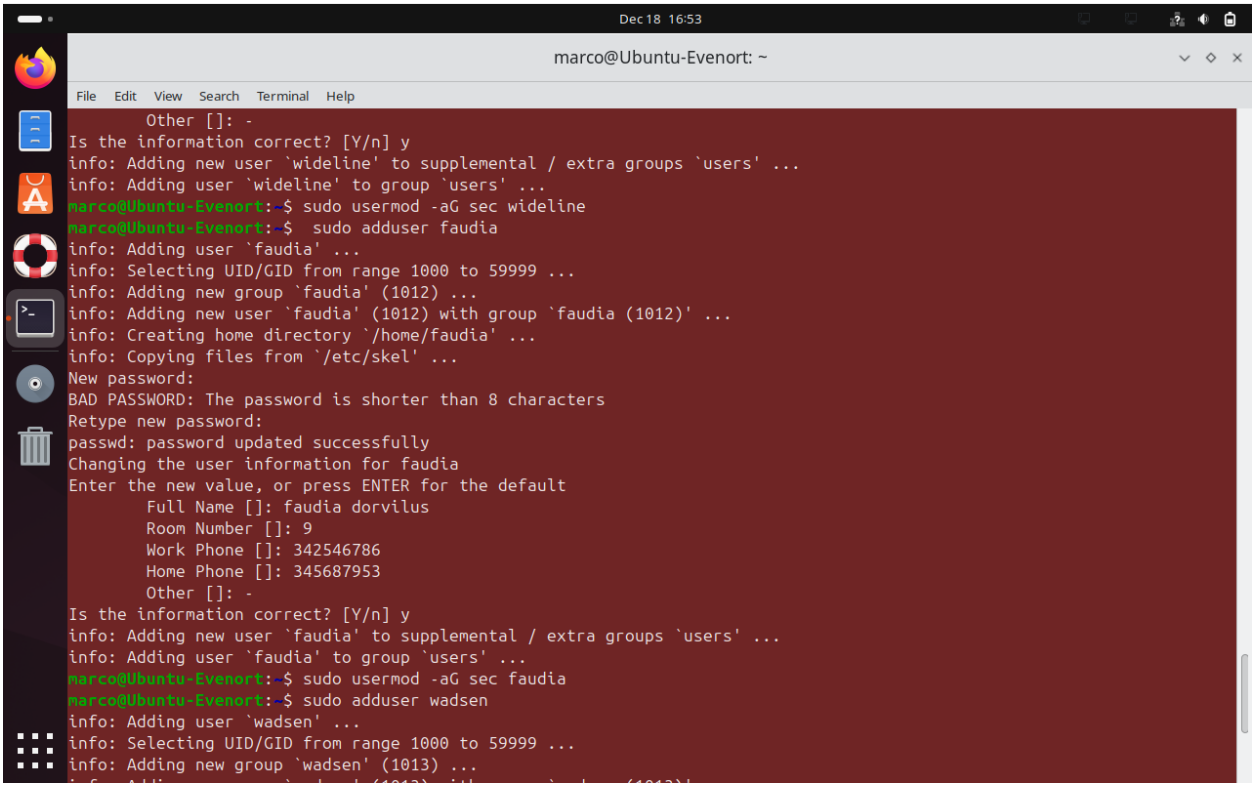
- Sur ces images, il nous montrent les utilisateurs suivant au groupe **DEV** (vue de la page 5 à 6)

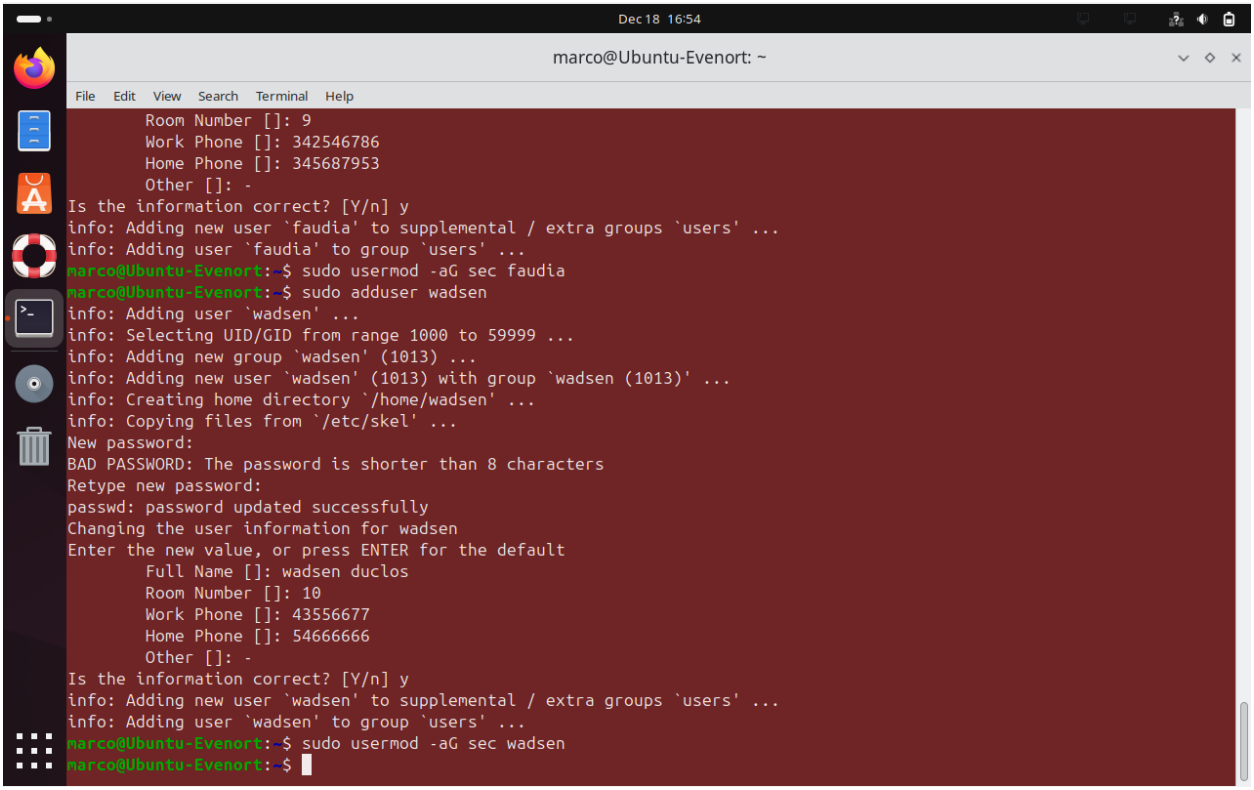
b)


Dec 18 16:40
marco@Ubuntu-Evenort: ~
File Edit View Search Terminal Help
marco@Ubuntu-Evenort:~$ sudo adduser william
info: Adding user `william' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `william' (1009) ...
info: Adding new user `william' (1009) with group `william (1009)' ...
info: Creating home directory `/home/william' ...
info: Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
Changing the user information for william
Enter the new value, or press ENTER for the default
Full Name []: william gabriel
Room Number []: 6
Work Phone []: 54667767
Home Phone []: 33445654
Other []: -
Is the information correct? [Y/n] y
info: Adding new user `william' to supplemental / extra groups `users' ...
info: Adding user `william' to group `users' ...
marco@Ubuntu-Evenort:~$ sudo usermod -aG sec william
marco@Ubuntu-Evenort:~$ sudo adduser rica
info: Adding user `rica' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `rica' (1010) ...
info: Adding new user `rica' (1010) with group `rica (1010)' ...
info: Creating home directory `/home/rica' ...
info: Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters


Dec 18 16:49
marco@Ubuntu-Evenort: ~
File Edit View Search Terminal Help
marco@Ubuntu-Evenort:~$ sudo adduser rica
info: Adding user `rica' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `rica' (1010) ...
info: Adding new user `rica' (1010) with group `rica (1010)' ...
info: Creating home directory `/home/rica' ...
info: Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
Changing the user information for rica
Enter the new value, or press ENTER for the default
Full Name []: rica saint fleur
Room Number []: 7
Work Phone []: 32445566
Home Phone []: 32444555
Other []: -
Is the information correct? [Y/n] y
info: Adding new user `rica' to supplemental / extra groups `users' ...
info: Adding user `rica' to group `users' ...
marco@Ubuntu-Evenort:~$ sudo usermod -aG sec rica
marco@Ubuntu-Evenort:~$ sudo adduser wideline
info: Adding user `wideline' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `wideline' (1011) ...
info: Adding new user `wideline' (1011) with group `wideline (1011)' ...
info: Creating home directory `/home/wideline' ...
info: Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters

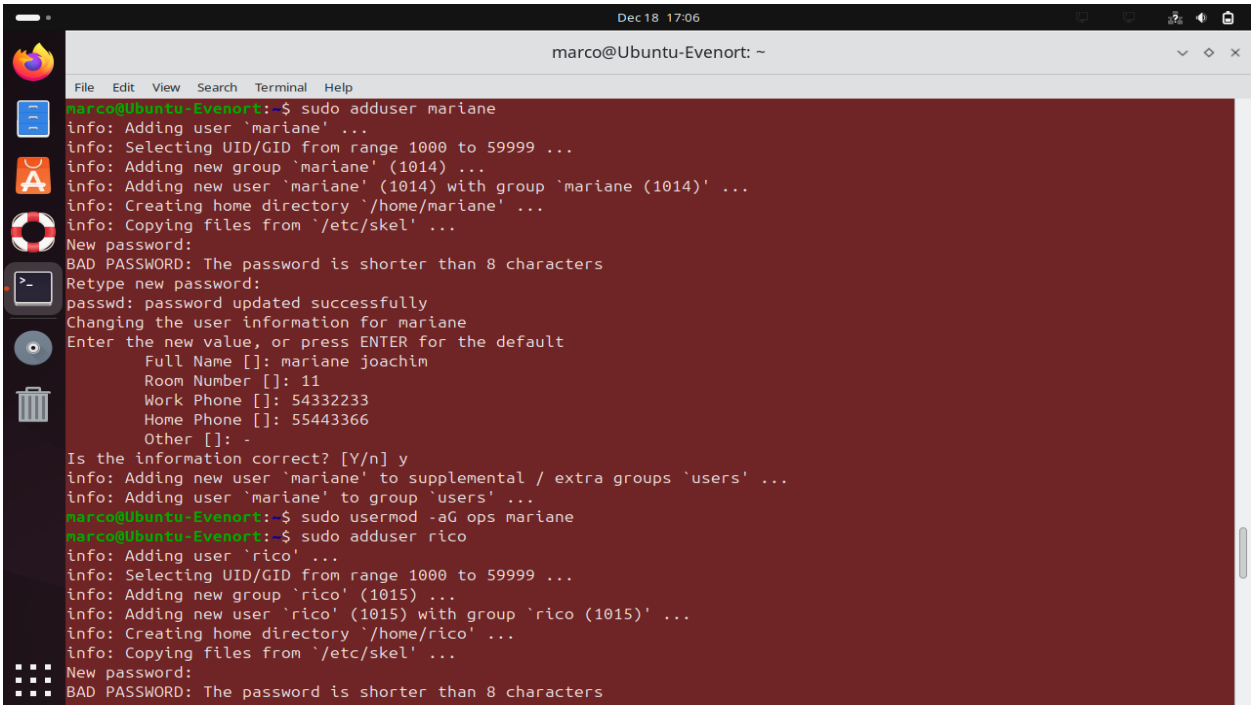

Dec 18 16:51
marco@Ubuntu-Evenort: ~
File Edit View Search Terminal Help
Retype new password:
passwd: password updated successfully
Changing the user information for rica
Enter the new value, or press ENTER for the default
Full Name []: rica saint fleur
Room Number []: 7
Work Phone []: 32445566
Home Phone []: 32444555
Other []: -
Is the information correct? [Y/n] y
info: Adding new user `rica' to supplemental / extra groups `users' ...
info: Adding user `rica' to group `users' ...
marco@Ubuntu-Evenort:~$ sudo usermod -aG sec rica
marco@Ubuntu-Evenort:~$ sudo adduser wideline
info: Adding user `wideline' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `wideline' (1011) ...
info: Adding new user `wideline' (1011) with group `wideline (1011)' ...
info: Creating home directory `/home/wideline' ...
info: Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
Changing the user information for wideline
Enter the new value, or press ENTER for the default
Full Name []: wideline julien
Room Number []: 8
Work Phone []: 34556674
Home Phone []: 42334433
Other []: -

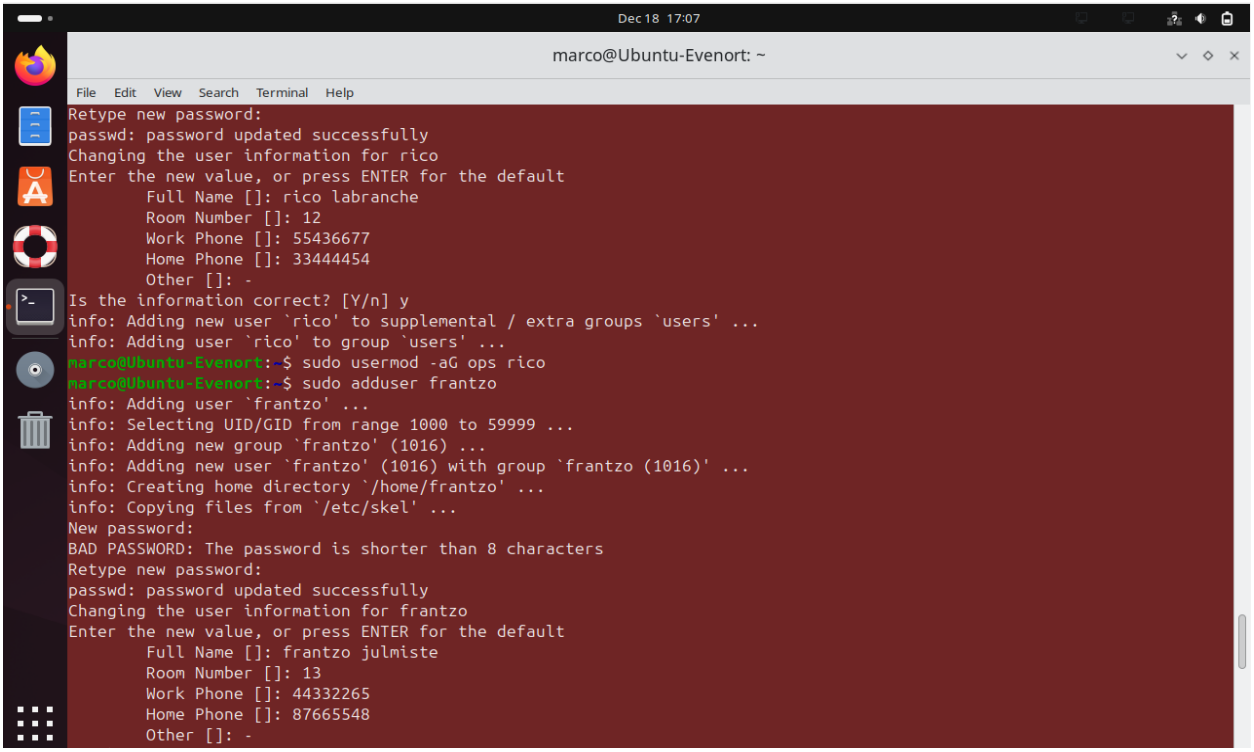

Dec 18 16:53
marco@Ubuntu-Evenort: ~
File Edit View Search Terminal Help
Other []: -
Is the information correct? [Y/n] y
info: Adding new user `wideline' to supplemental / extra groups `users' ...
info: Adding user `wideline' to group `users' ...
marco@Ubuntu-Evenort:~$ sudo usermod -aG sec wideline
marco@Ubuntu-Evenort:~$ sudo adduser faudia
info: Adding user `faudia' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `faudia' (1012) ...
info: Adding new user `faudia' (1012) with group `faudia (1012)' ...
info: Creating home directory `/home/faudia' ...
info: Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
Changing the user information for faudia
Enter the new value, or press ENTER for the default
Full Name []: faudia dorvilus
Room Number []: 9
Work Phone []: 342546786
Home Phone []: 345687953
Other []: -
Is the information correct? [Y/n] y
info: Adding new user `faudia' to supplemental / extra groups `users' ...
info: Adding user `faudia' to group `users' ...
marco@Ubuntu-Evenort:~$ sudo usermod -aG sec faudia
marco@Ubuntu-Evenort:~$ sudo adduser wadsen
info: Adding user `wadsen' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `wadsen' (1013) ...

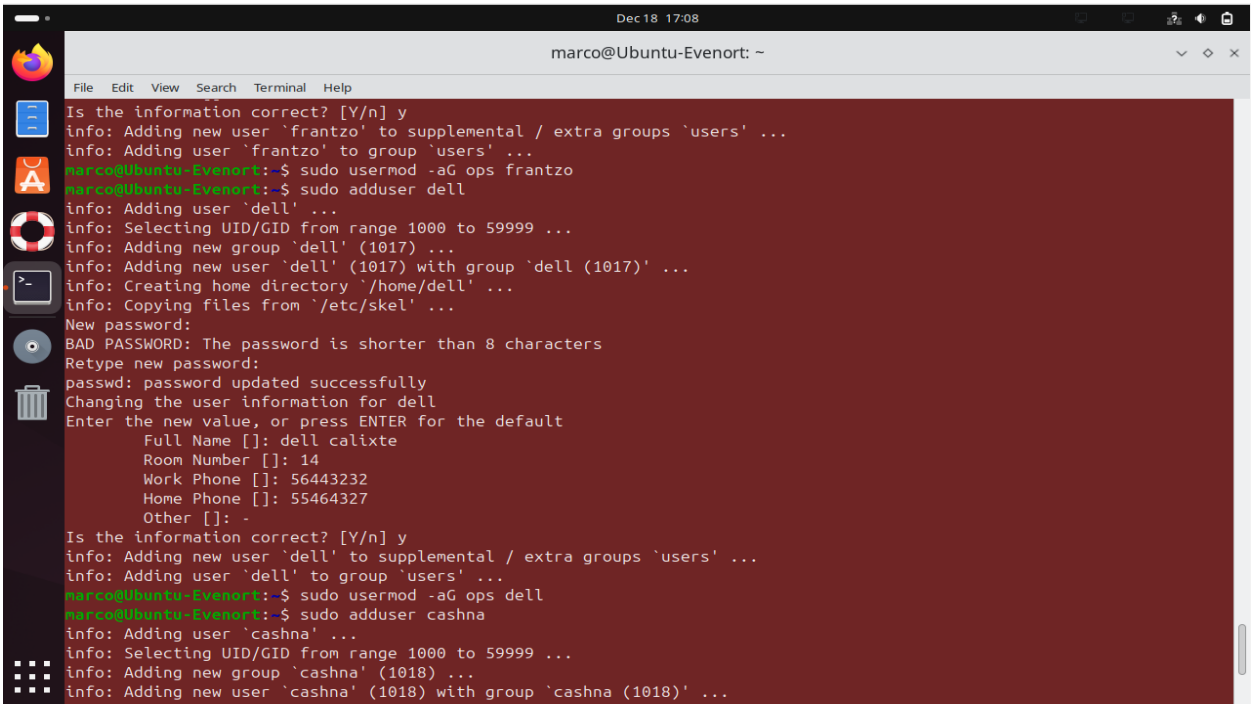


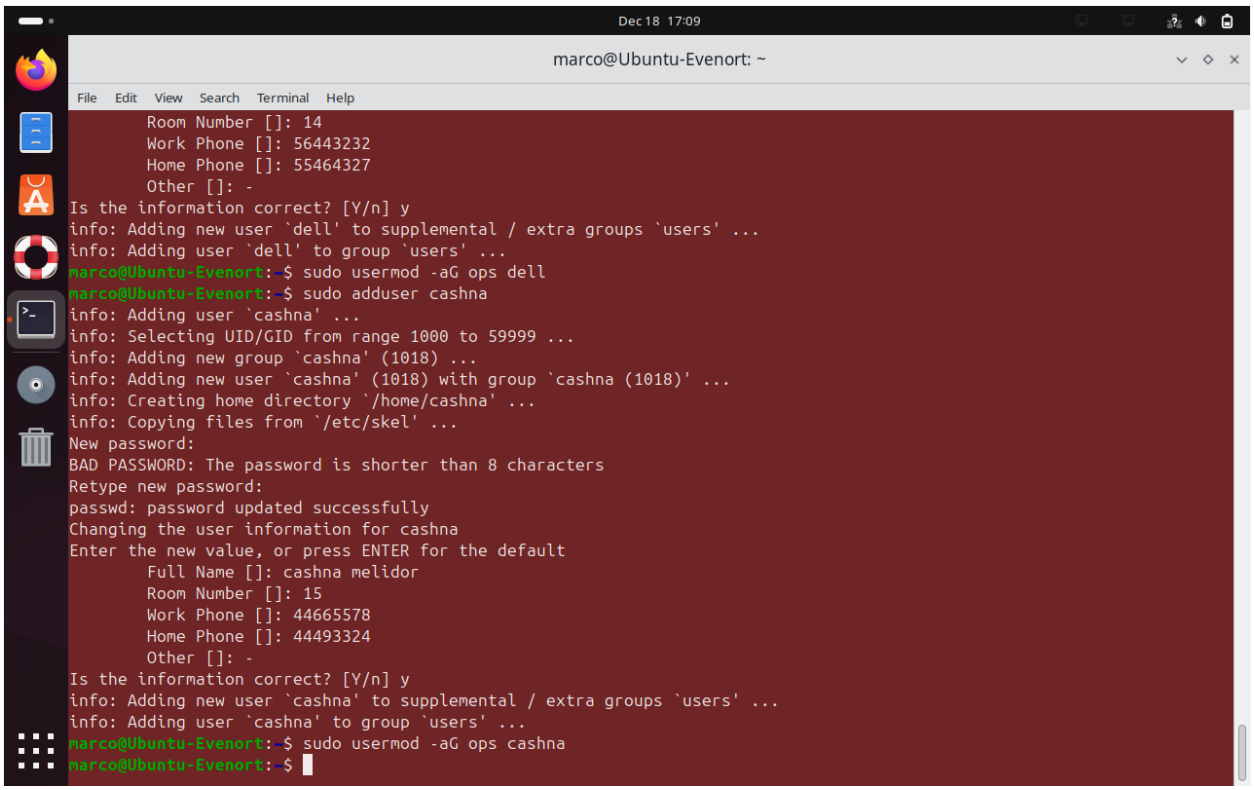
- Sur ces images, il nous montrent les utilisateurs suivant au groupe **SEC**
- (vue à la page 7 à 9).

c)

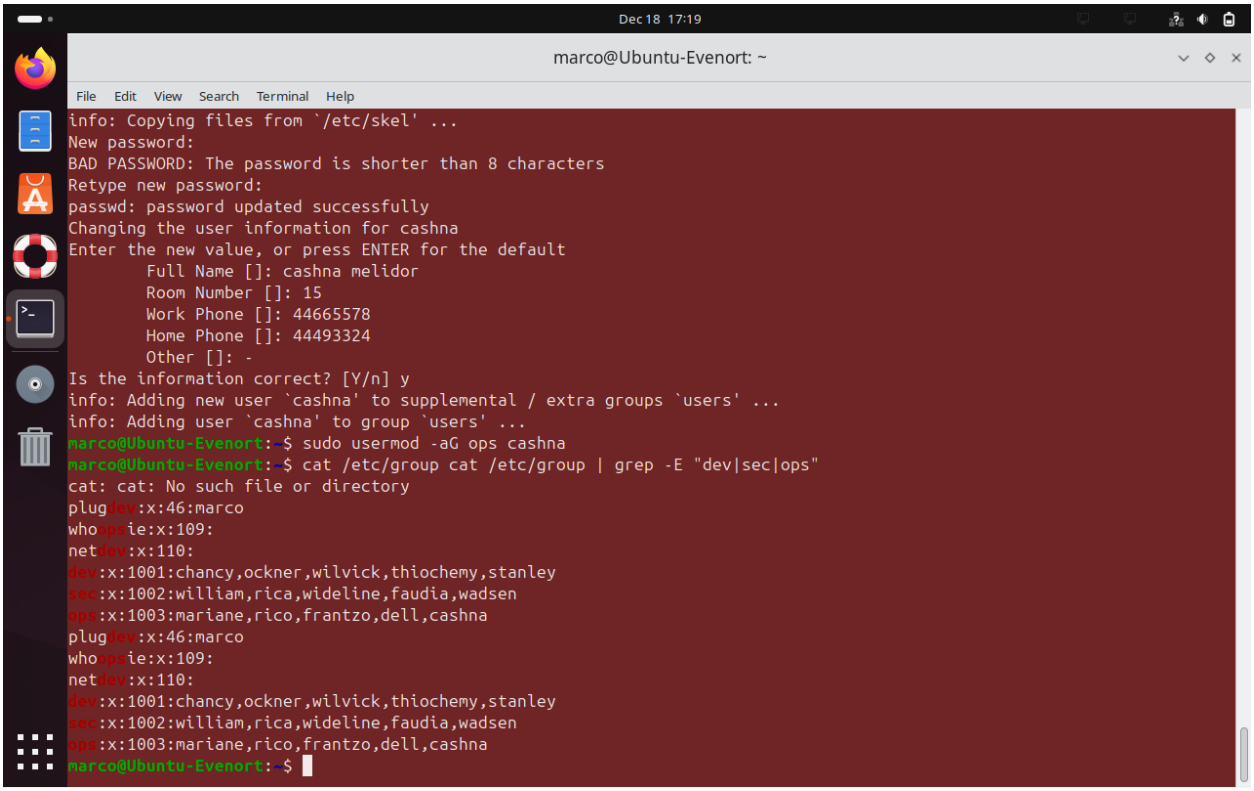

Dec 18 17:06
marco@Ubuntu-Evenort: ~
File Edit View Search Terminal Help
marco@Ubuntu-Evenort:~$ sudo adduser mariane
info: Adding user `mariane' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `mariane' (1014) ...
info: Adding new user `mariane' (1014) with group `mariane (1014)' ...
info: Creating home directory `/home/mariane' ...
info: Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
Changing the user information for mariane
Enter the new value, or press ENTER for the default
Full Name []: mariane joachim
Room Number []: 11
Work Phone []: 54332233
Home Phone []: 55443366
Other []: -
Is the information correct? [Y/n] y
info: Adding new user `mariane' to supplemental / extra groups `users' ...
info: Adding user `mariane' to group `users' ...
marco@Ubuntu-Evenort:~$ sudo usermod -aG ops mariane
marco@Ubuntu-Evenort:~$ sudo adduser rico
info: Adding user `rico' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `rico' (1015) ...
info: Adding new user `rico' (1015) with group `rico (1015)' ...
info: Creating home directory `/home/rico' ...
info: Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters


Dec 18 17:07
marco@Ubuntu-Evenort: ~
File Edit View Search Terminal Help
Retype new password:
passwd: password updated successfully
Changing the user information for rico
Enter the new value, or press ENTER for the default
Full Name []: rico labranche
Room Number []: 12
Work Phone []: 55436677
Home Phone []: 33444454
Other []: -
Is the information correct? [Y/n] y
info: Adding new user `rico' to supplemental / extra groups `users' ...
info: Adding user `rico' to group `users' ...
marco@Ubuntu-Evenort:~$ sudo usermod -aG ops rico
marco@Ubuntu-Evenort:~$ sudo adduser frantzo
info: Adding user `frantzo' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `frantzo' (1016) ...
info: Adding new user `frantzo' (1016) with group `frantzo (1016)' ...
info: Creating home directory `/home/frantzo' ...
info: Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
Changing the user information for frantzo
Enter the new value, or press ENTER for the default
Full Name []: frantzo julmiste
Room Number []: 13
Work Phone []: 44332265
Home Phone []: 87665548
Other []: -

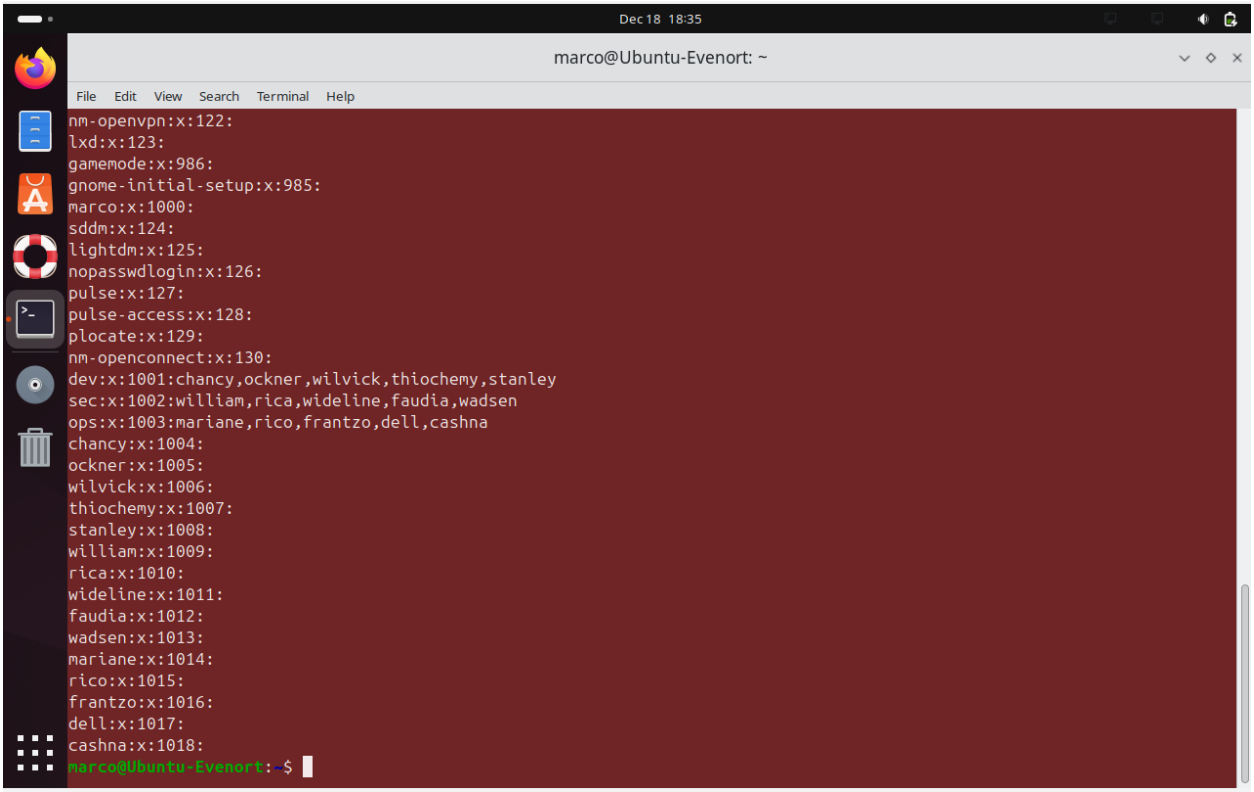




- Sur ces images, il nous montrent les utilisateurs suivant au groupe **OPS** (vue à la page 10 à 11).



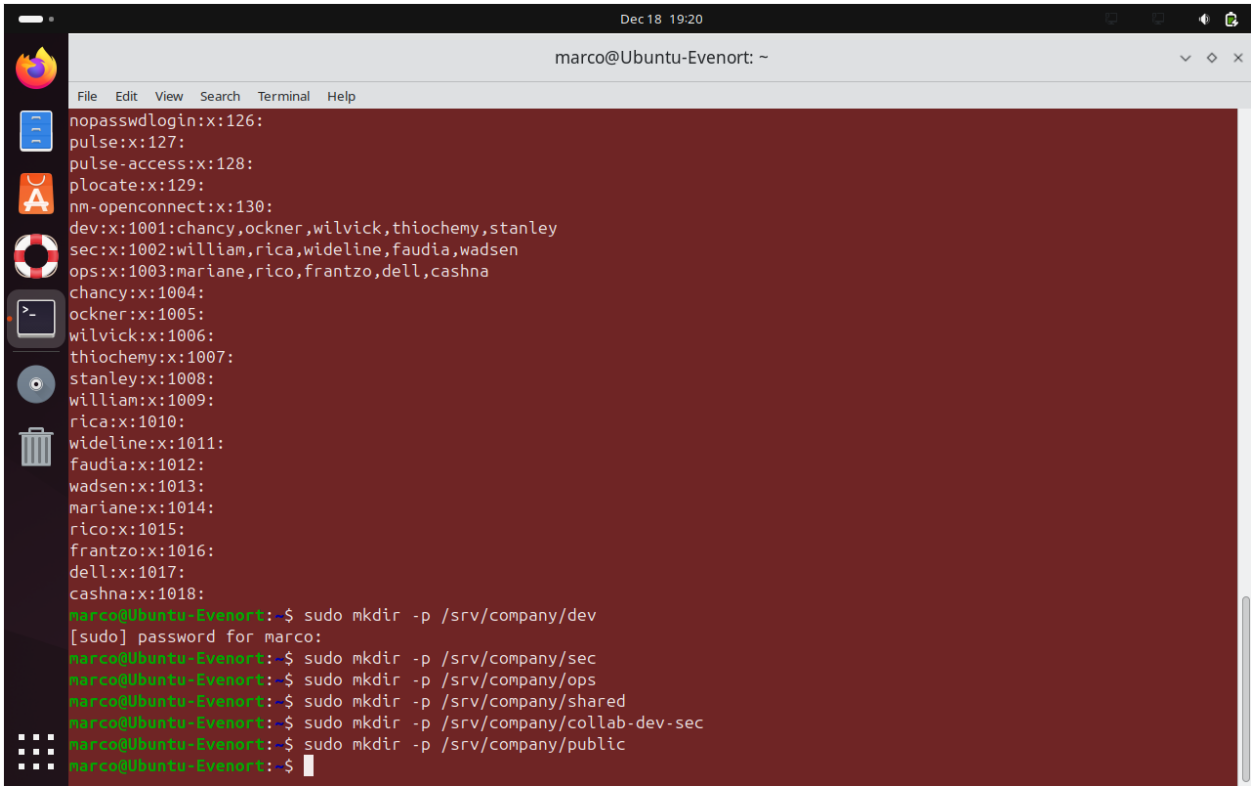
- Sur cette image, j’ai fait la vérification en utilisant la commande habituel **cat /etc/group | grep -E “dev|sec|ops”.**



- Dans cette image, j’ai listé les groups **(dev,sec et ops)**

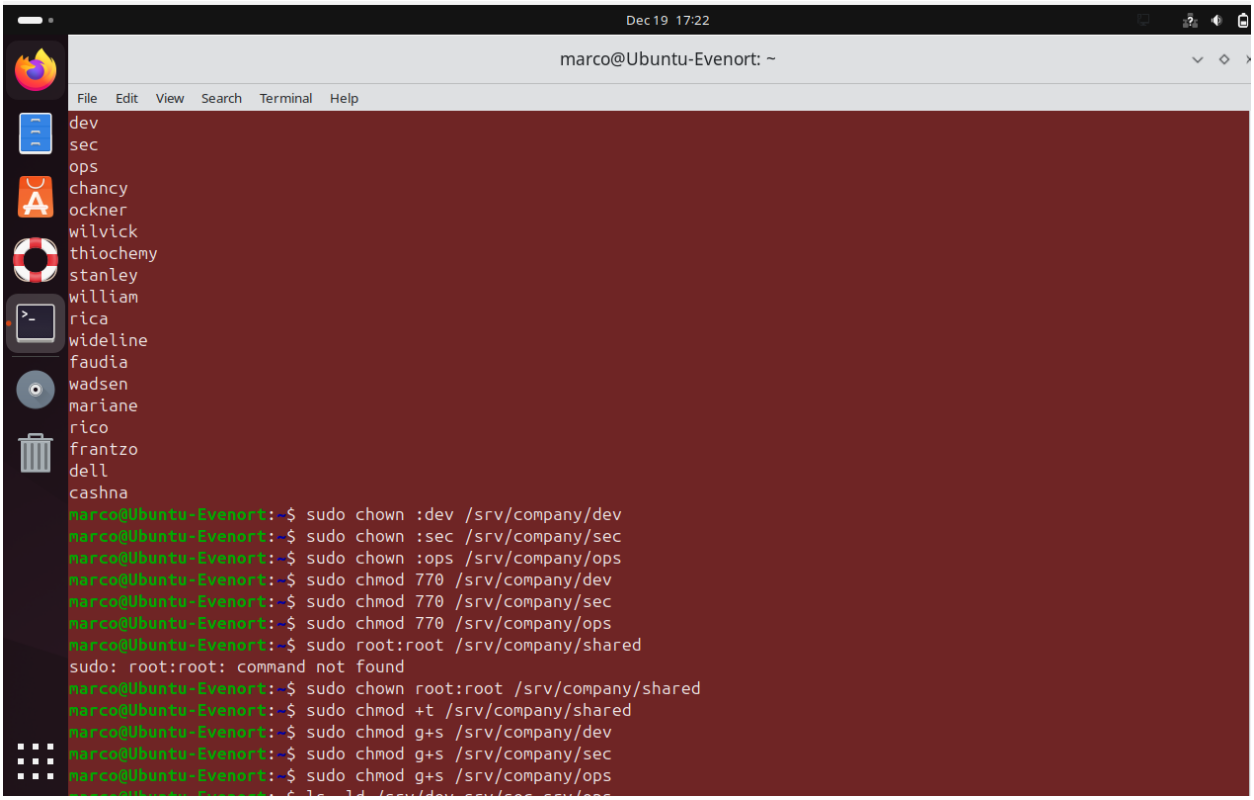
3. Mise en place de l’arborescence

- J’ai Crée les 6 répertoires du schéma.

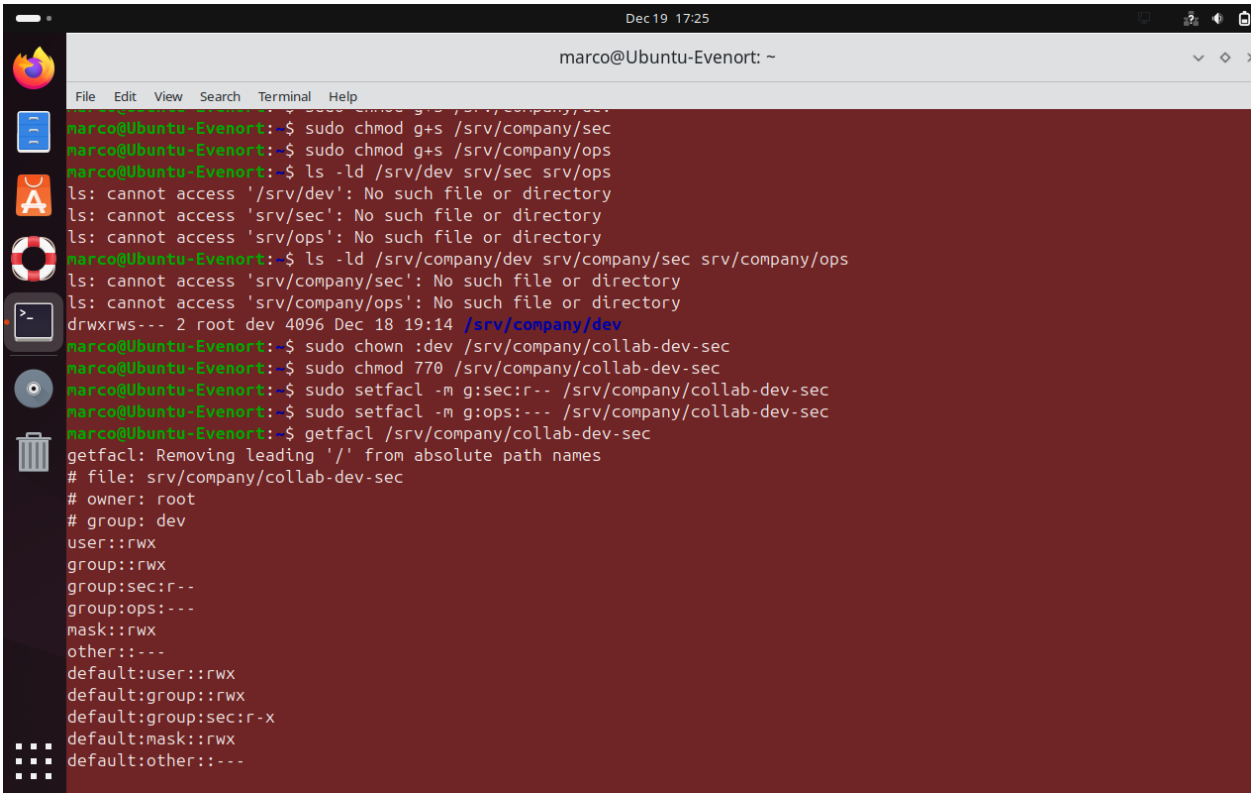


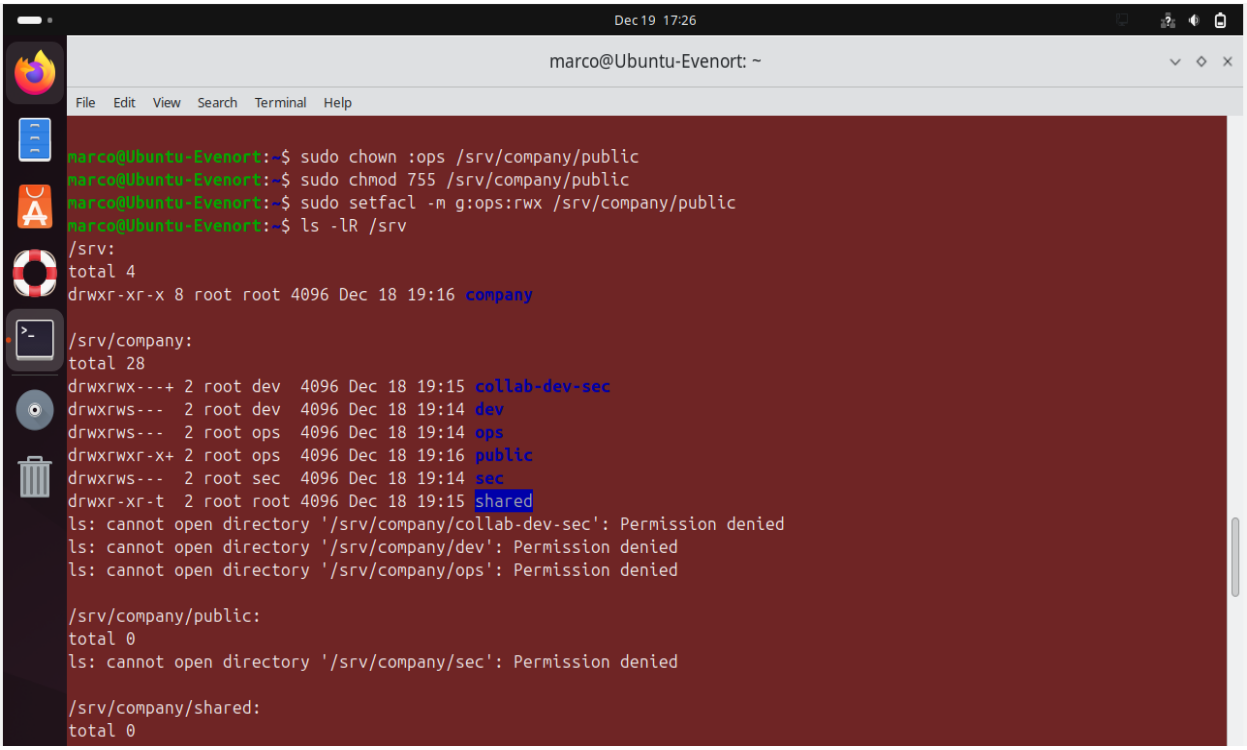
- Ici cette image nous montre la mise en place de l’arborescence c’est-à-dire les six (6) répertoires crées.

4. Configuration des permissions

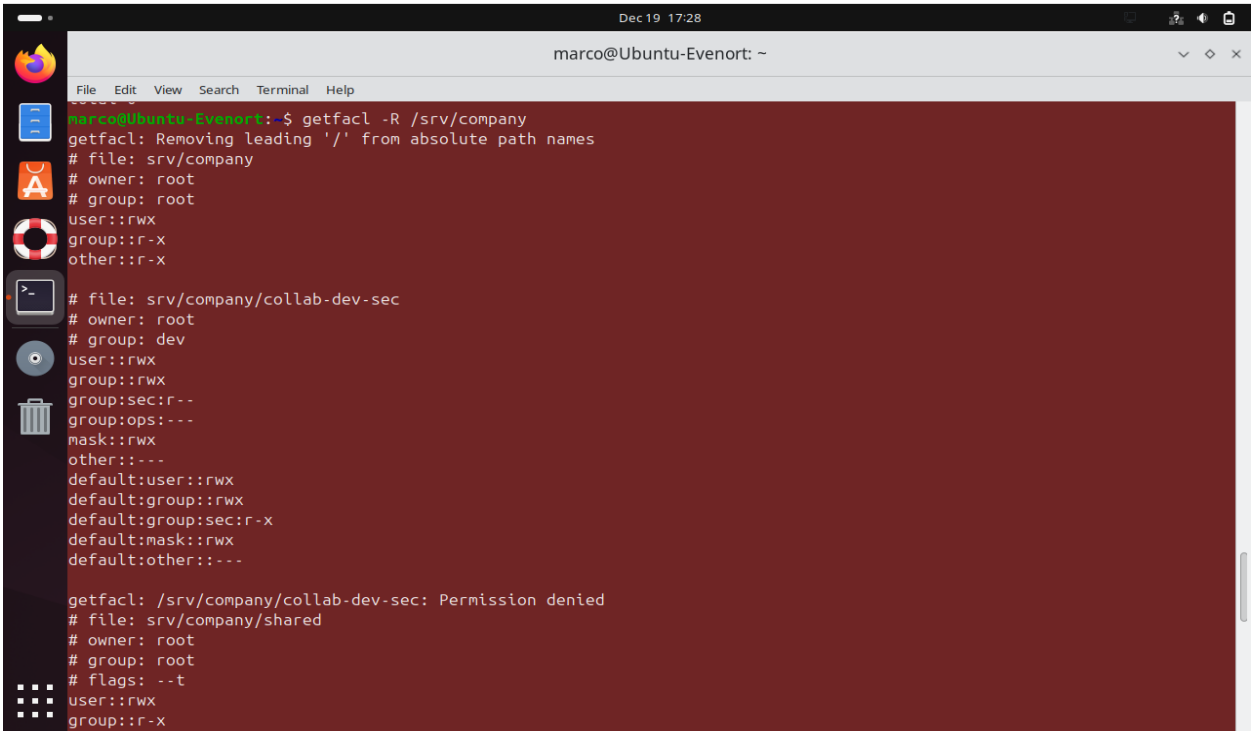


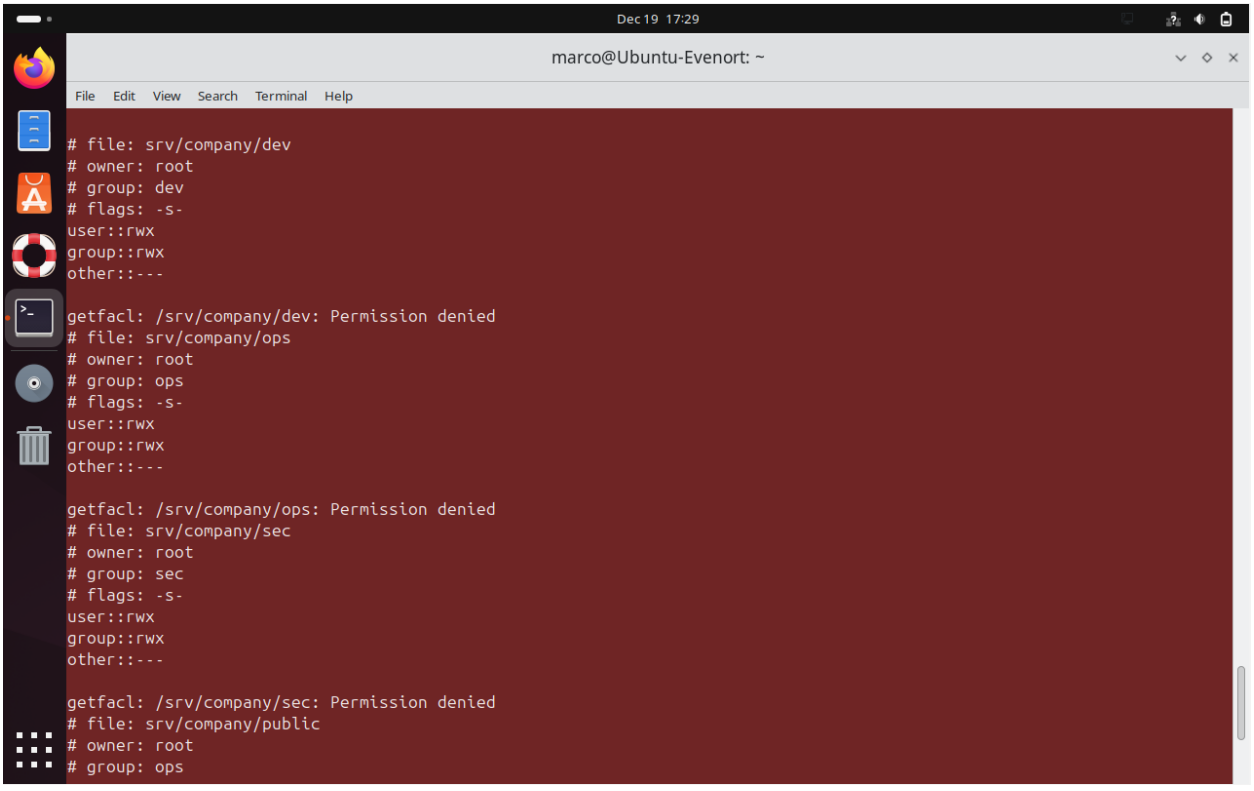
- Sur cette image, j’ai donné la permission avec les différentes groupes (dev,sec et ops).



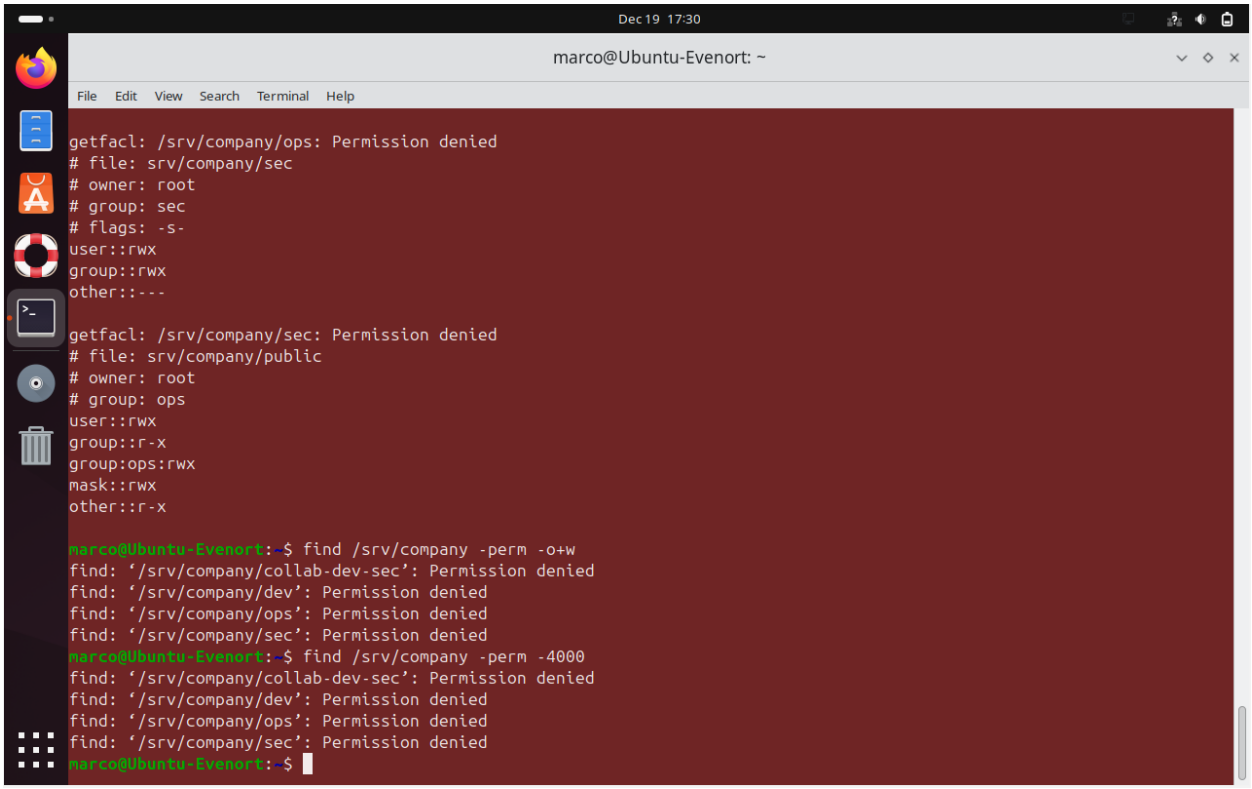


- Sur ces deux images, j'ai realisé un audit en listant toutes les permissions de **/srv**.





- Sur ces deux images, j'ai utilisé la commande **getfacl –R /srv/company** pour faire la vérification.



- Sur cette image, j'ai détecté les fichiers trop permissifs en vérifiant aussi les dossiers avec SUID/SGID/Sticky Bit.

Conclusion

Ce TD a permis de mettre en pratique les mécanismes de sécurité des fichiers sous Linux dans un contexte professionnel. Malgré certaines difficultés rencontrées, notamment dans la compréhension et la configuration du SGID, du sticky bit et des ACL, les objectifs ont pu être atteints. Les tests réalisés et l'audit final ont confirmé le bon fonctionnement des permissions mises en place. Ce travail a ainsi contribué à renforcer la compréhension de la gestion des droits et de la sécurité sous Linux.