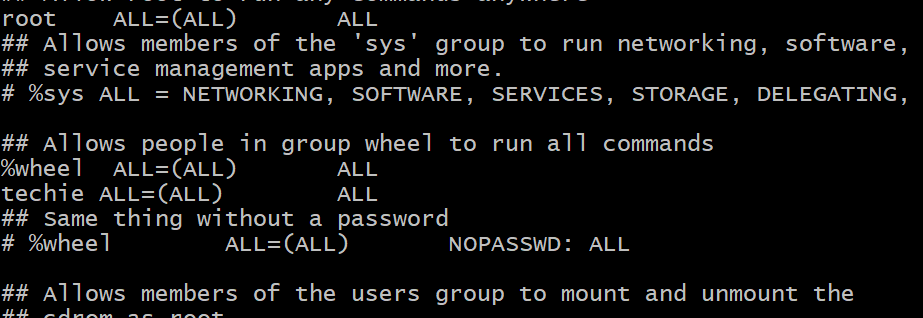
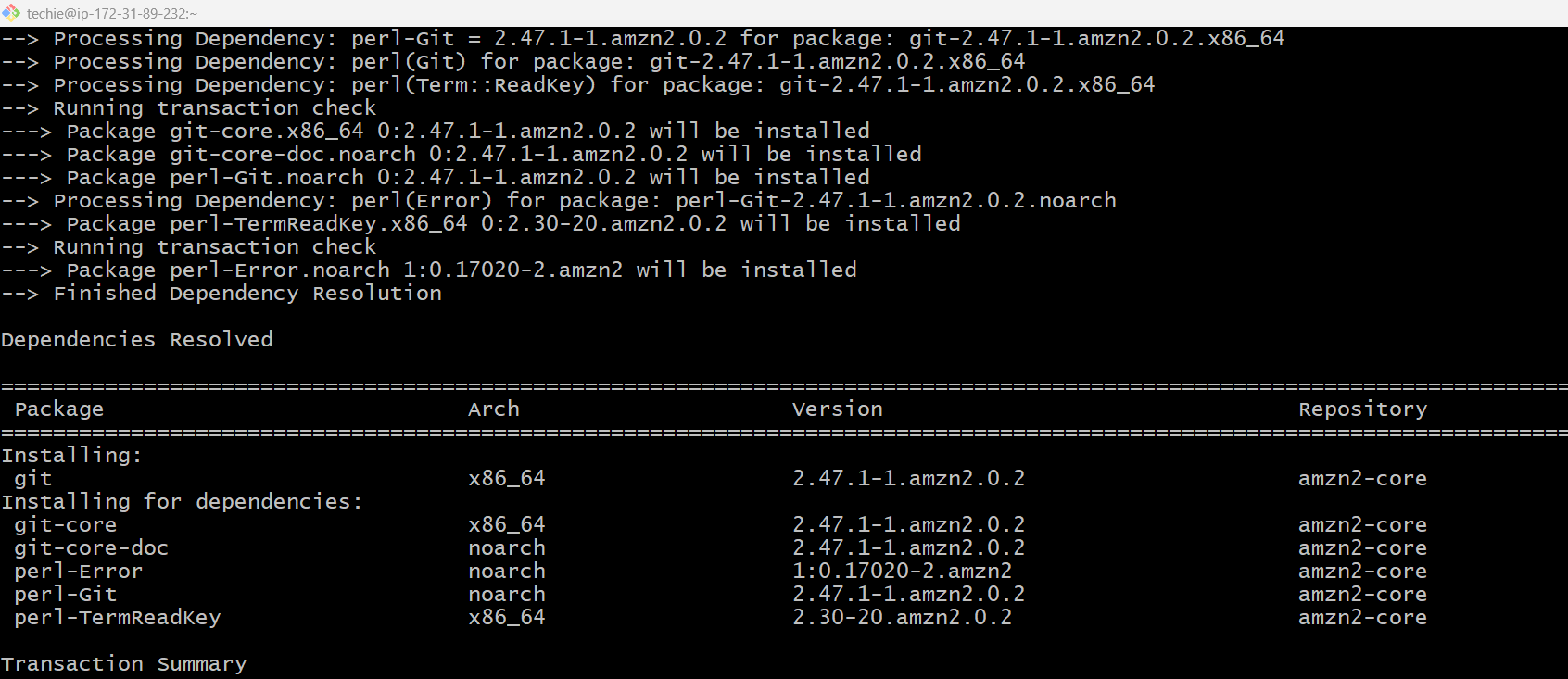
1) Create user with name Techie and provide sudo access to user.

****

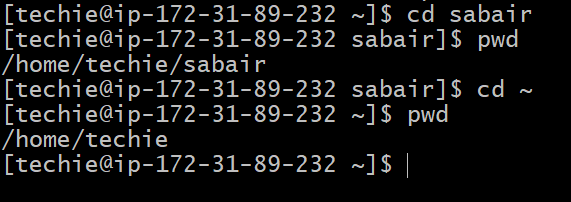
Providing the sudoer access to the user Techie and trying to install git:



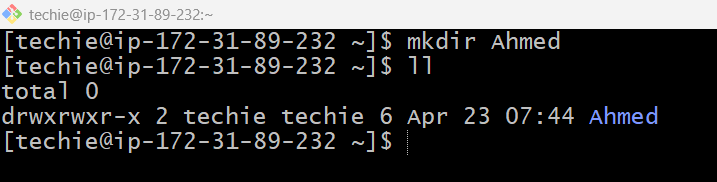


****

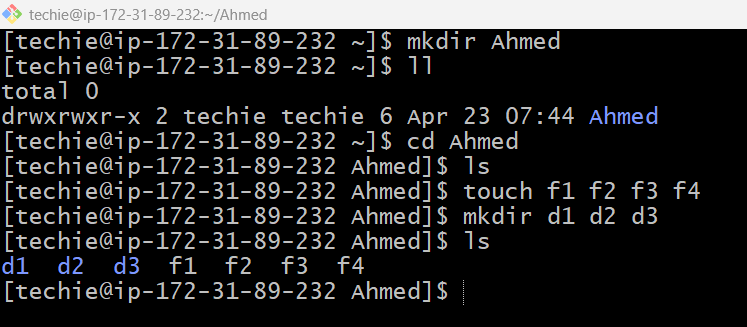
2) Navigate to the home directory.



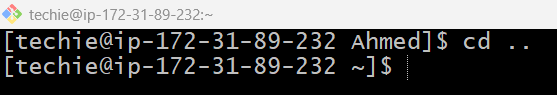
3) Create a new directory



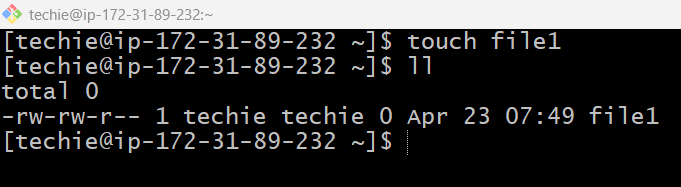
4) List the contents of a directory



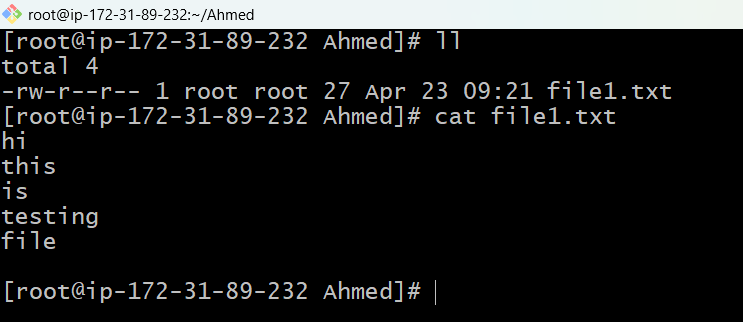
5) Change the current directory.



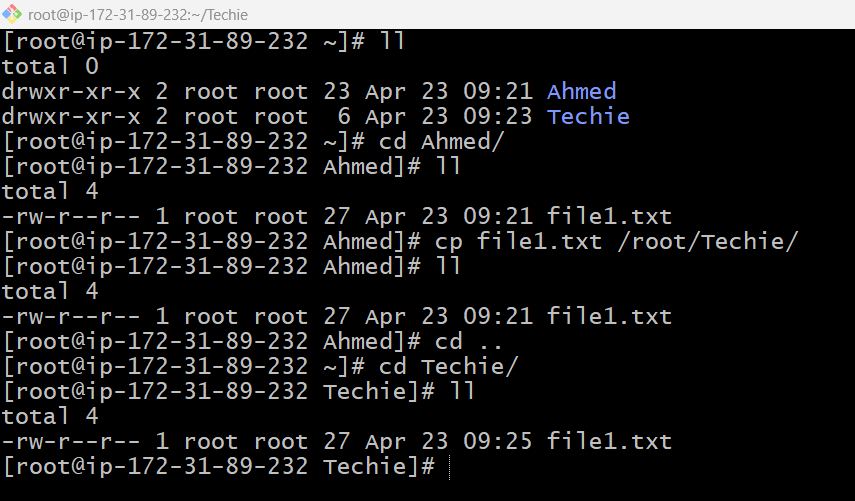
6) Create a new empty file.



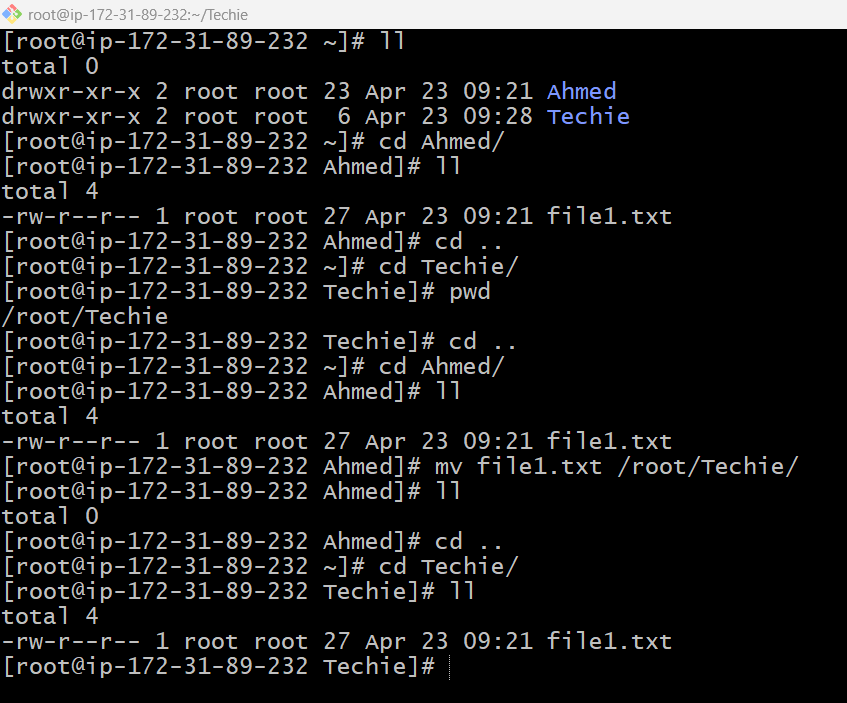
7) View the contents of a file.



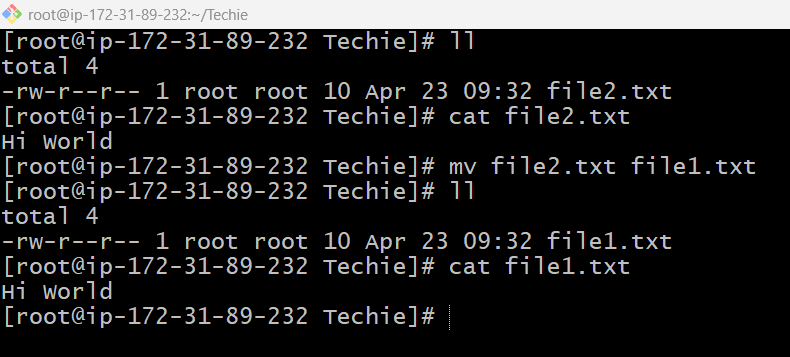
8) Copy a file to another location.



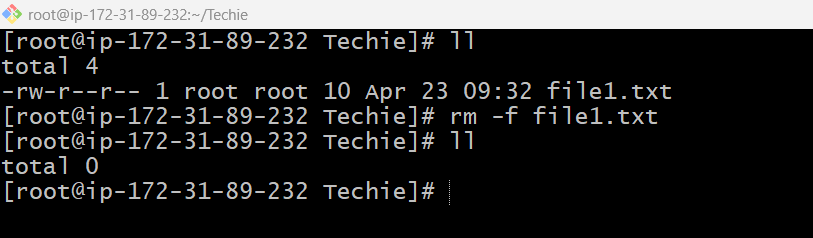
9) Move a file to another location



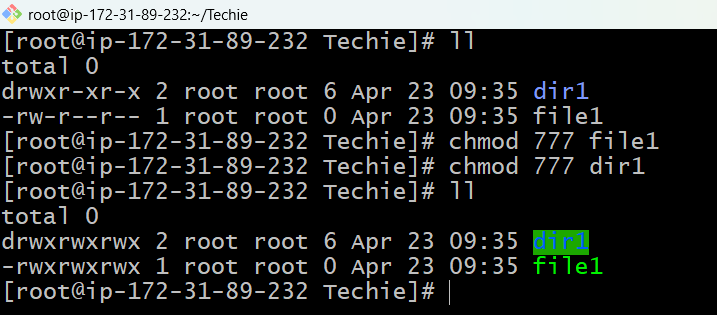
10) Rename a file



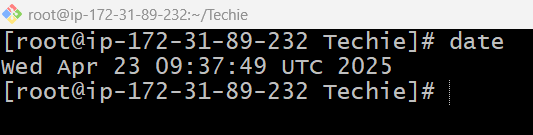
11) Delete a file



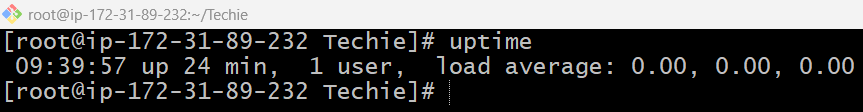
12) Grant or revoke permissions on a file or directory



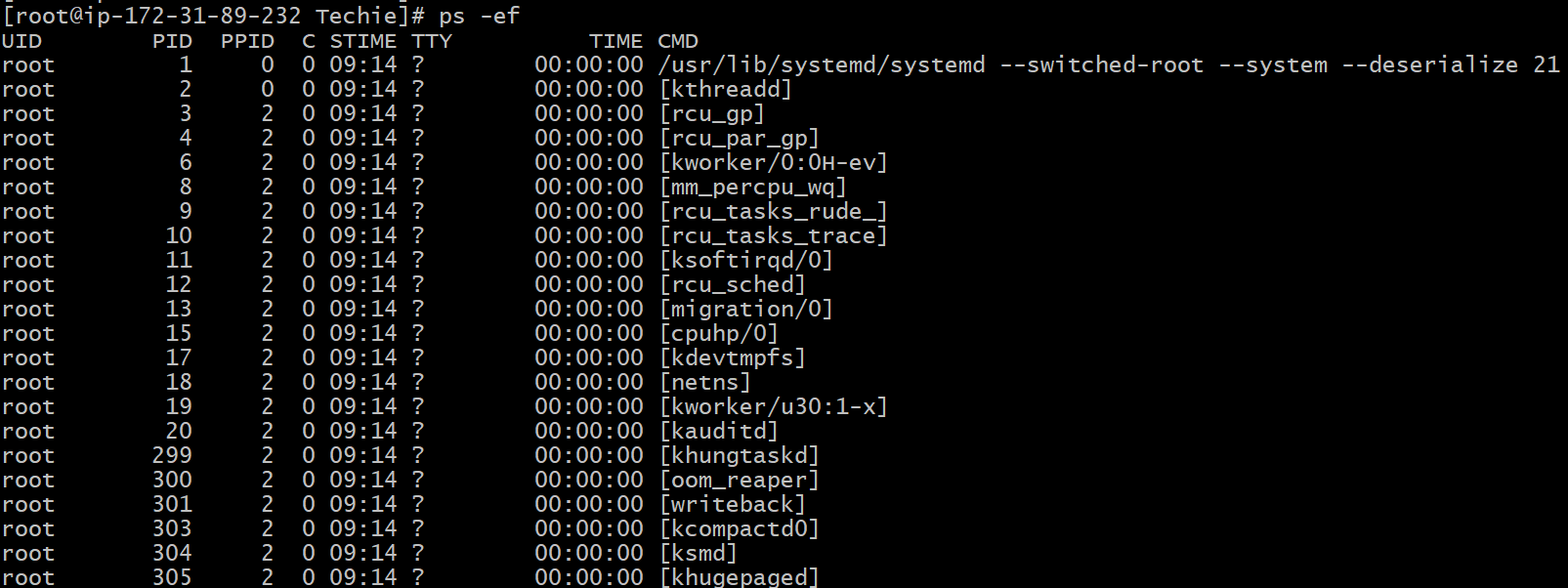
13) View the current date and time

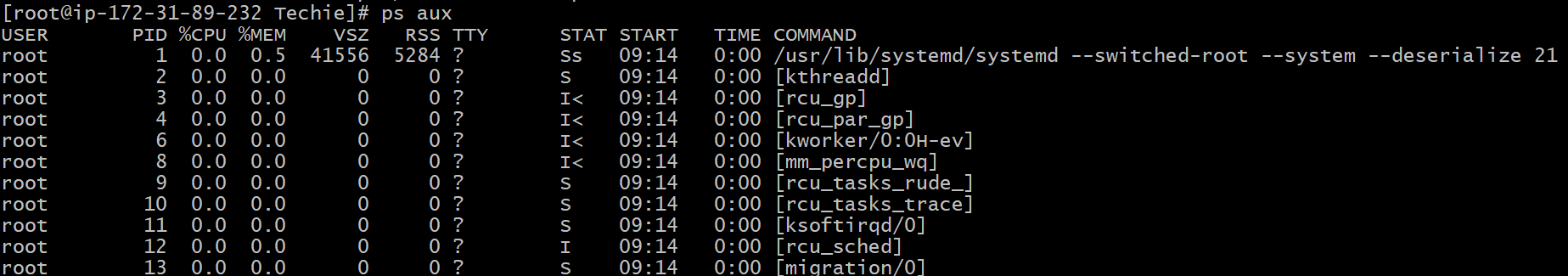
Kill a running process

14) Check the system uptime

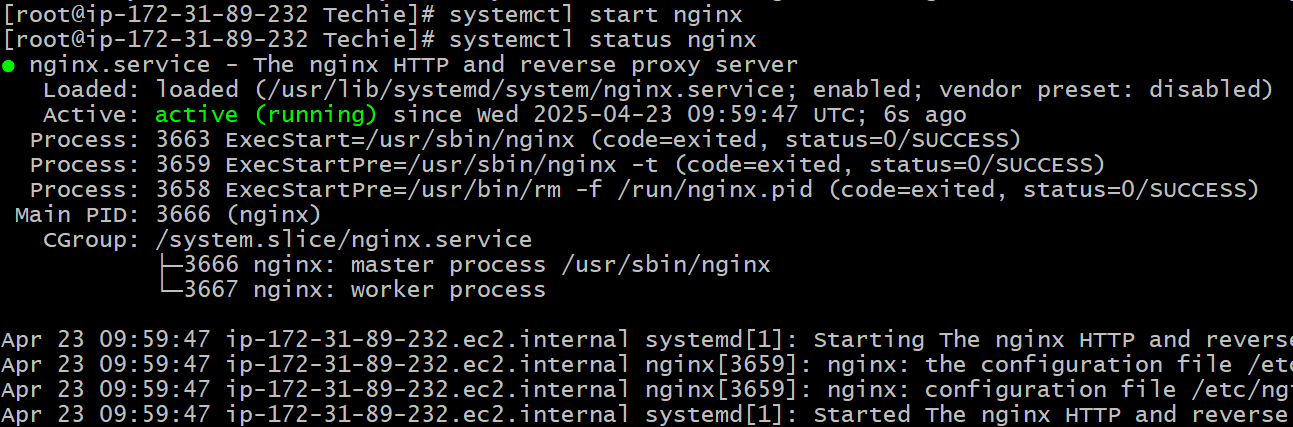


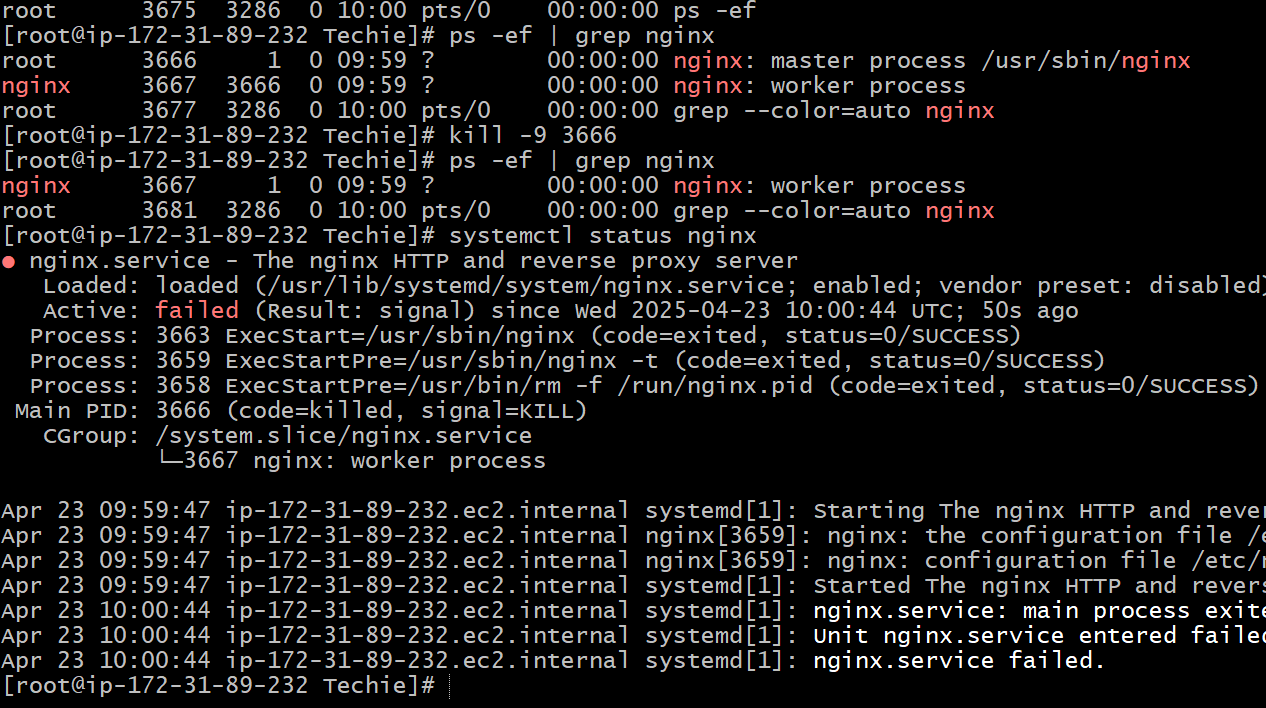
15) View the running processes



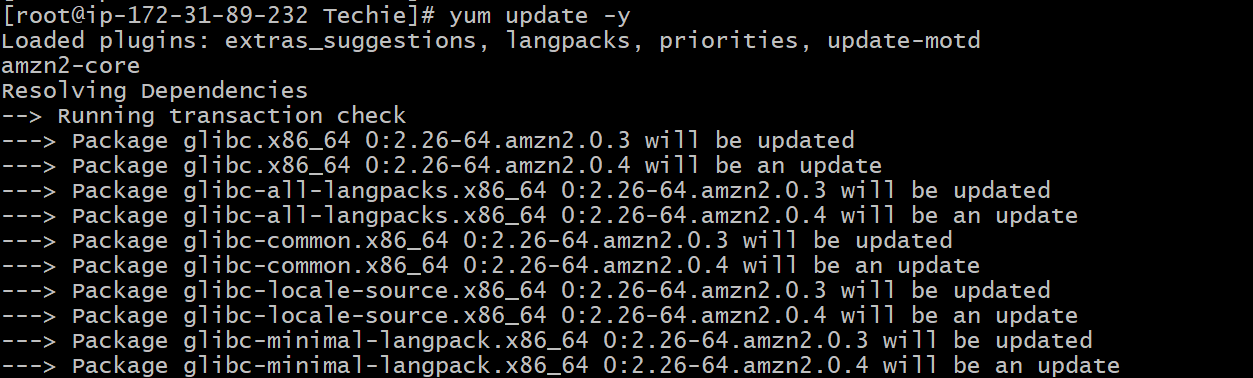


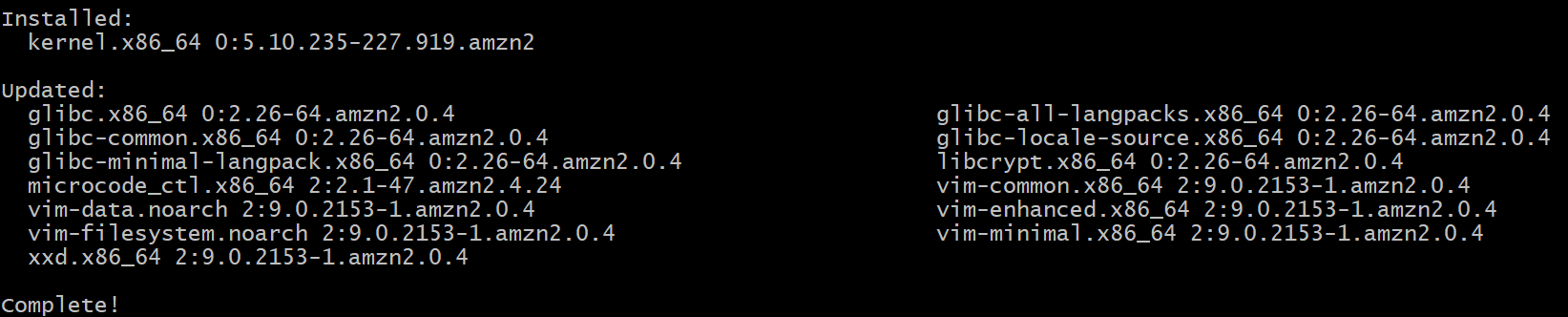
16) Kill a running process



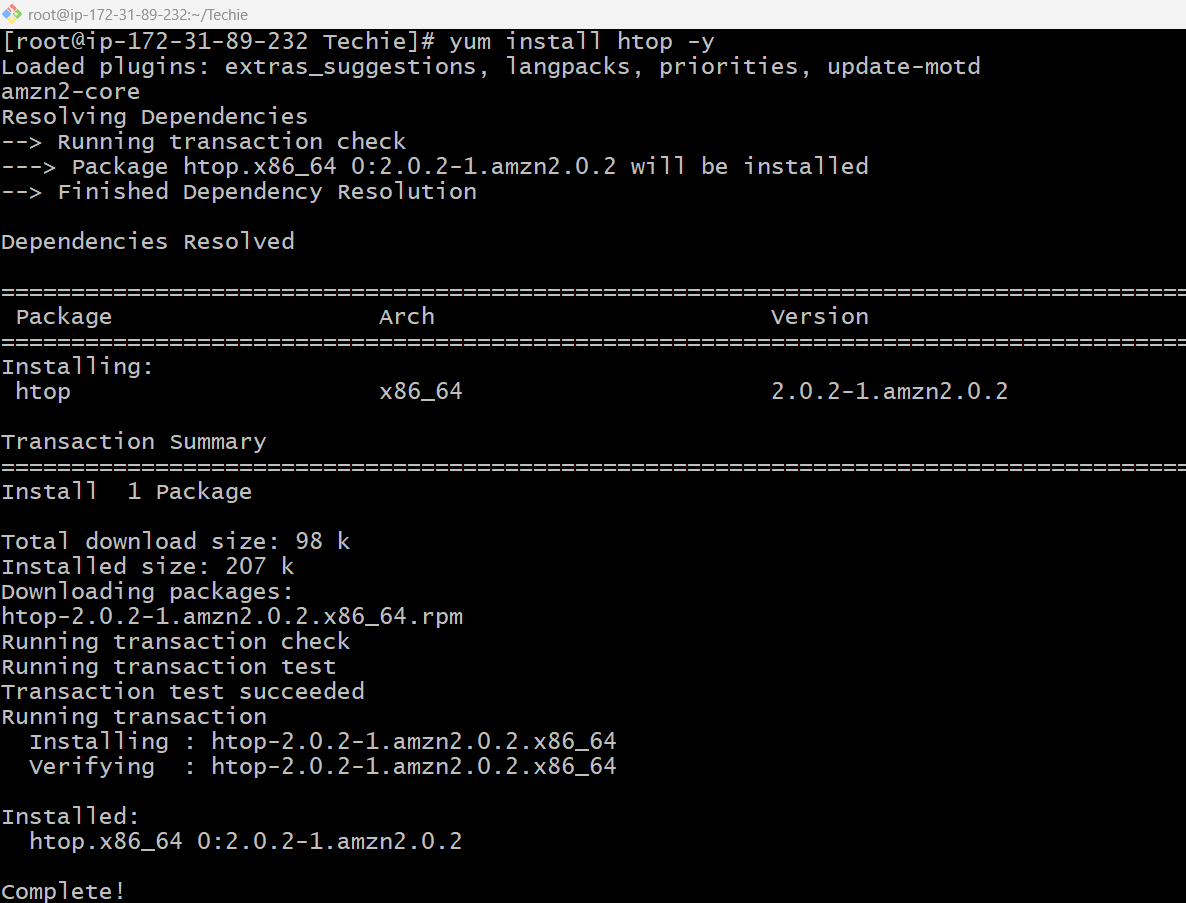


18) Update the system packages

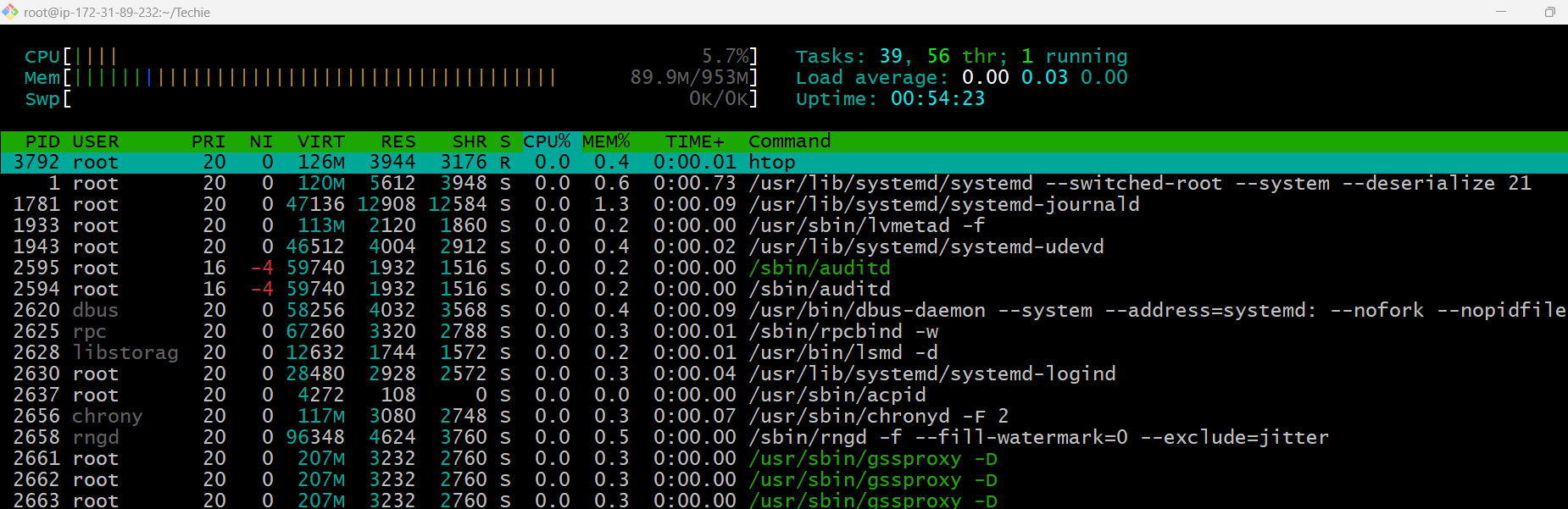


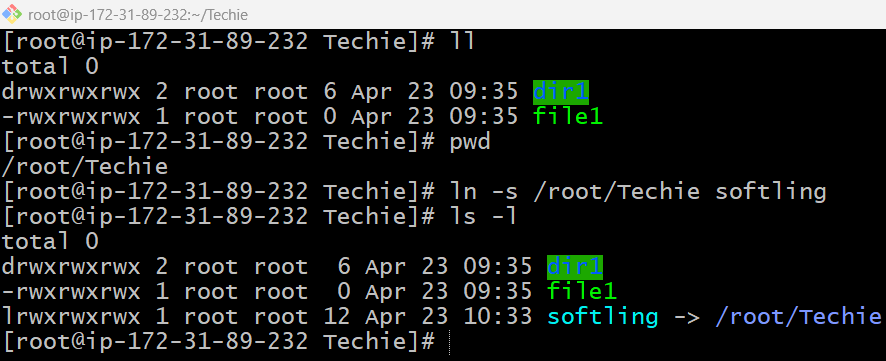


17) Install a package using the package manager (e.g., apt or yum).

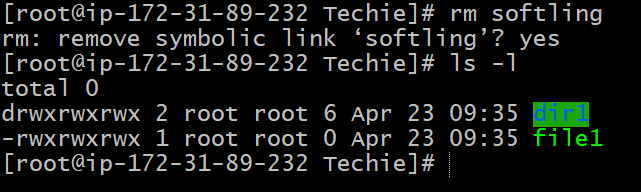




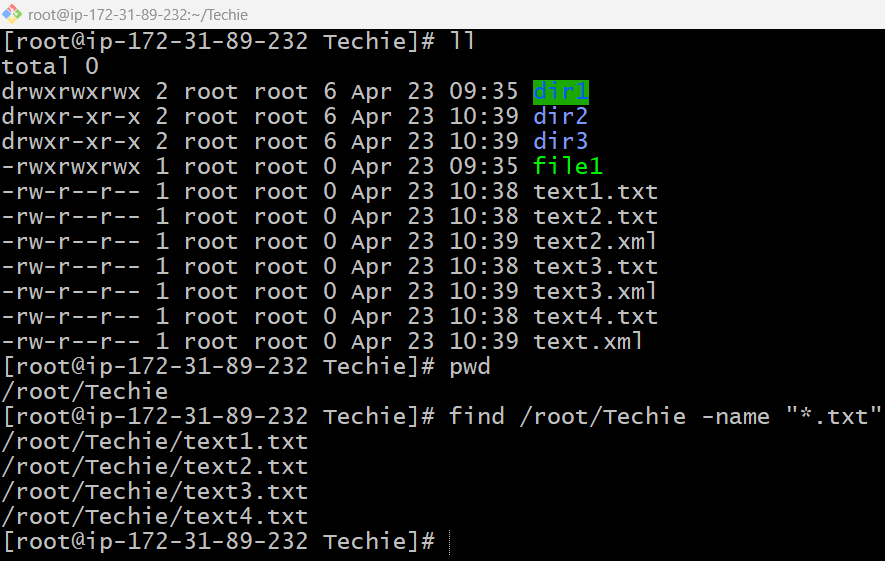


19) Create a symbolic link

20) Remove the symbolic link (soft link)

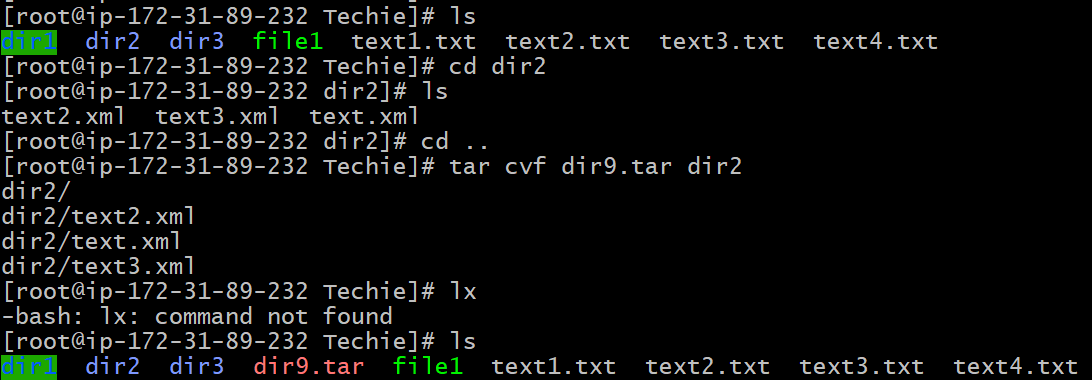


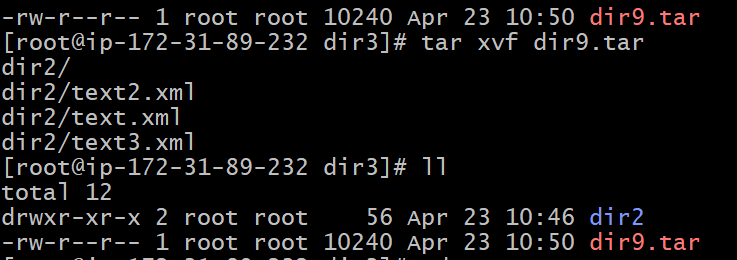
21) Search for files using the find command



22) Compress and decompress files using tar

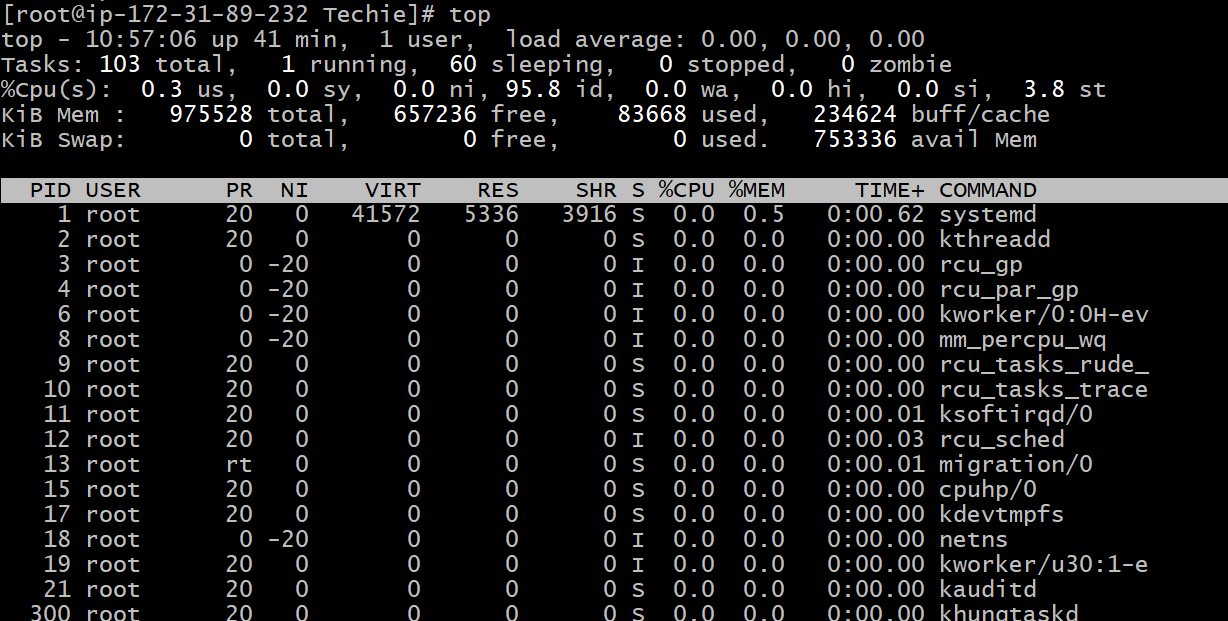
Compress the files:



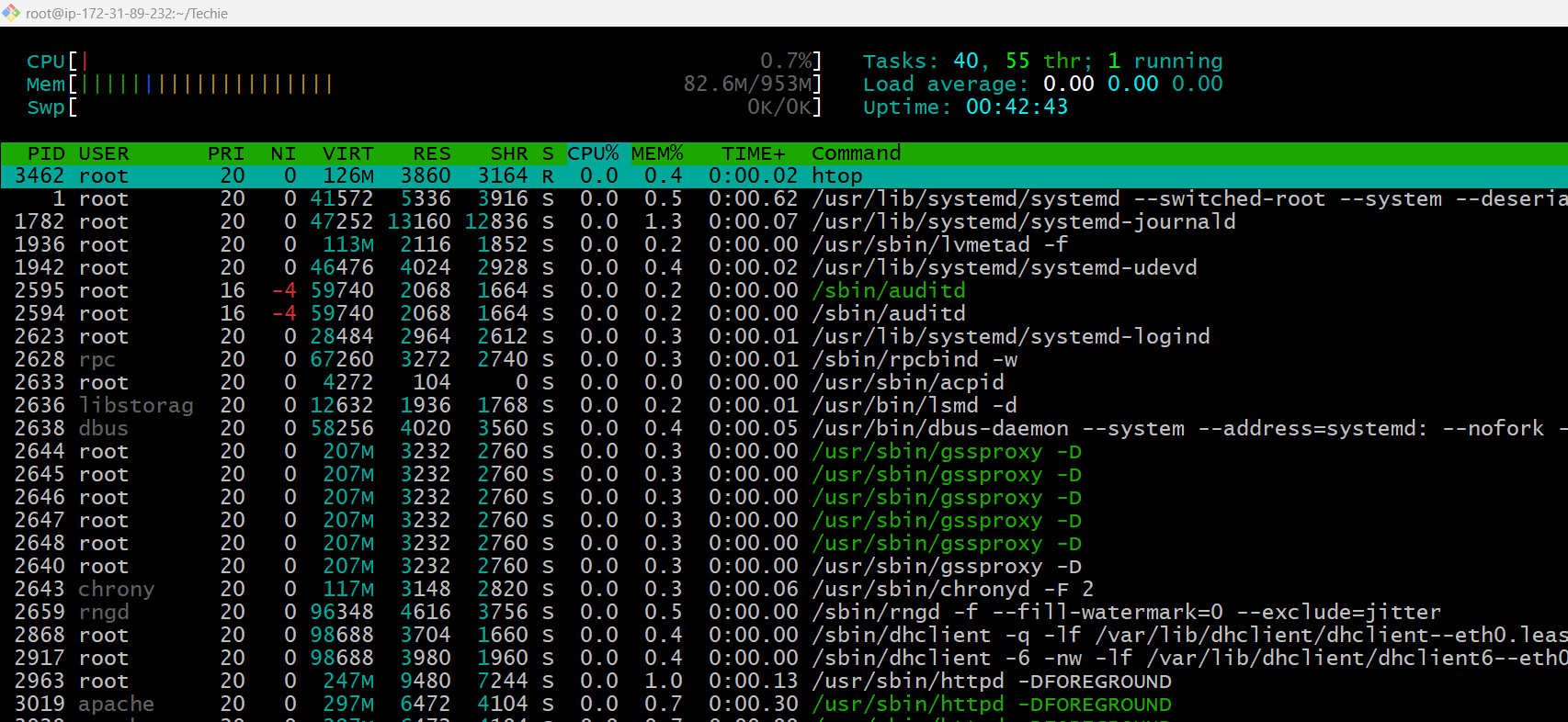
Decompress the files:

23) Monitor system resources with top or htop

Top:



Htop:



24) Create and manage user groups

i) Create a group and list the groups



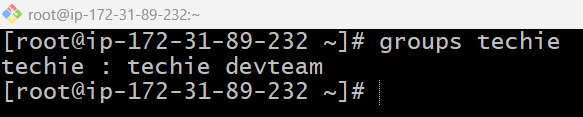


ii) Add a User to a Group

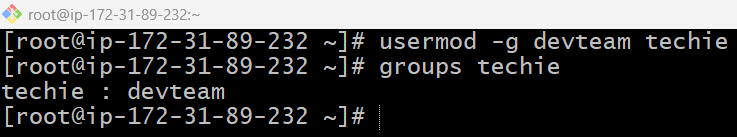


📌 The user may need to log out and log back in for the group changes to take effect.

iii) View Group Membership



iv) Change a User's Primary Group



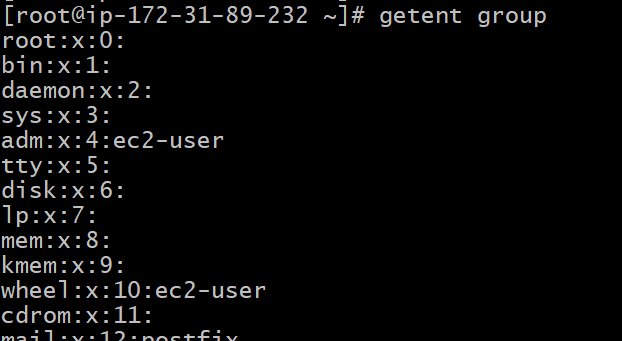
The primary group is shown as the user's default group when they create files.

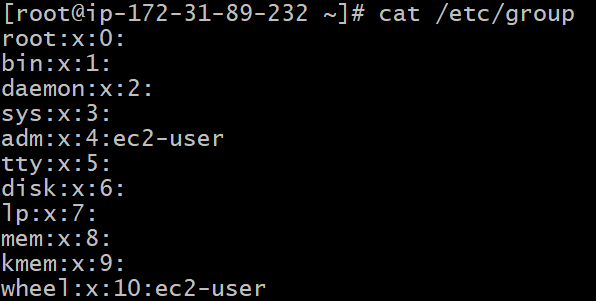
v) Remove a User from a Group

Manually edit the group entry:



vi) List All Groups



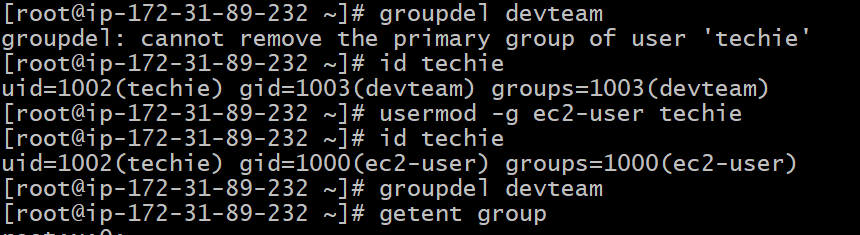


vii) Delete a Group

---- If the group **exists**, it will show something like:

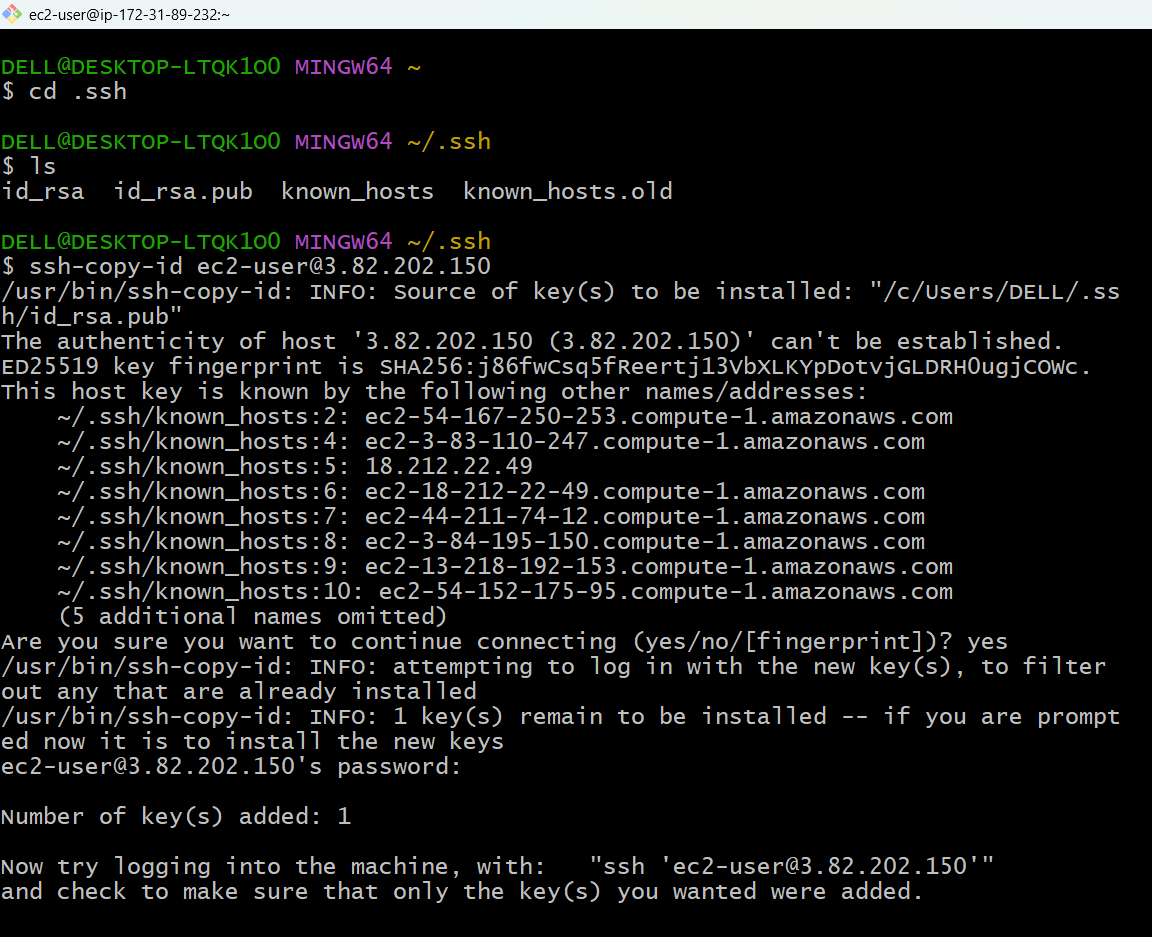
devteam:x:1002:

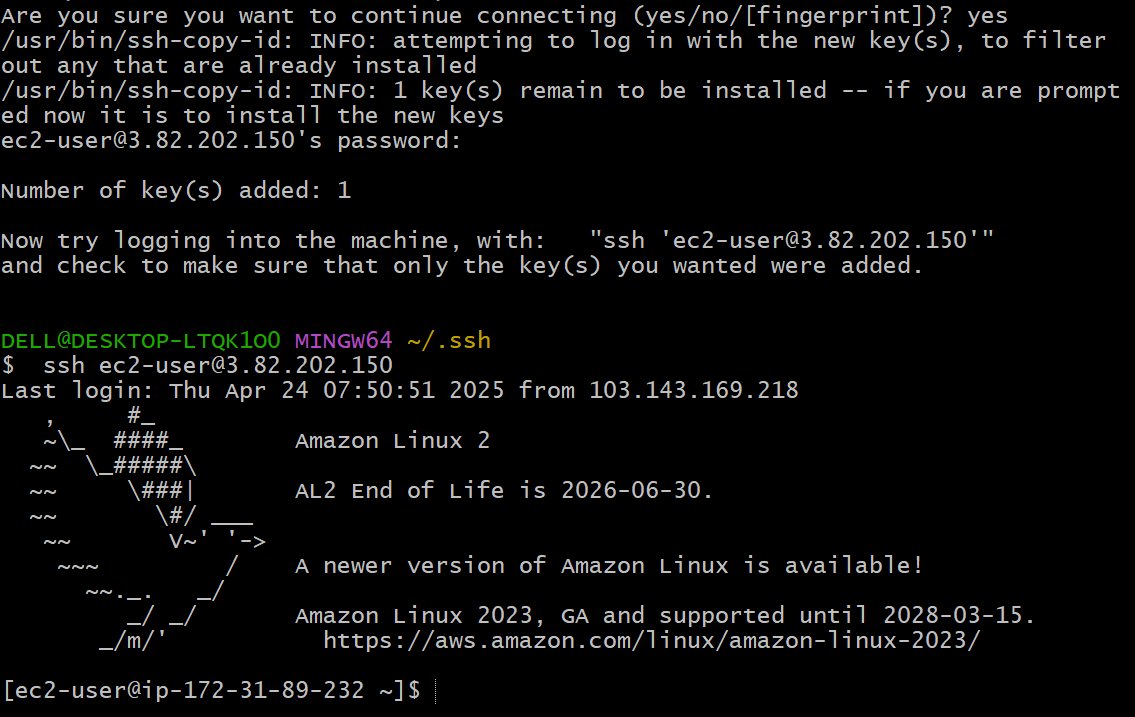
---- If the group **doesn’t exist**, there will be **no output**.





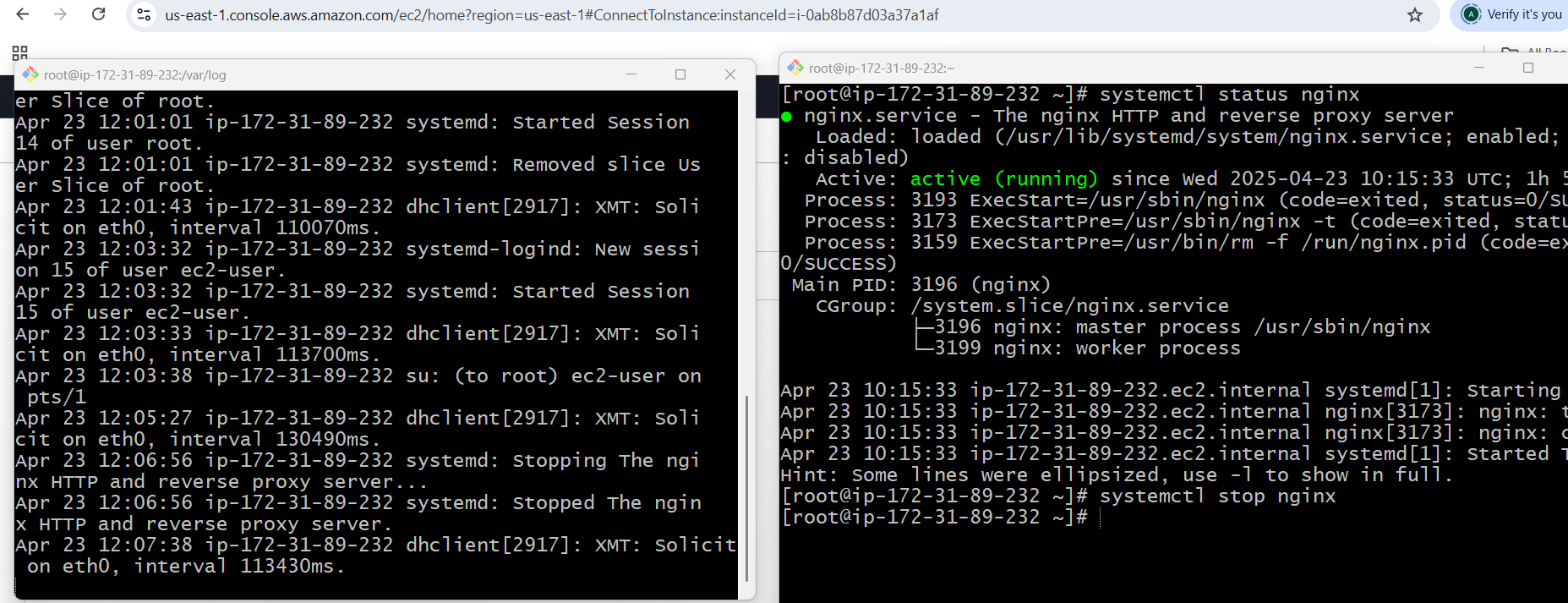
25) Set up SSH password less authentication



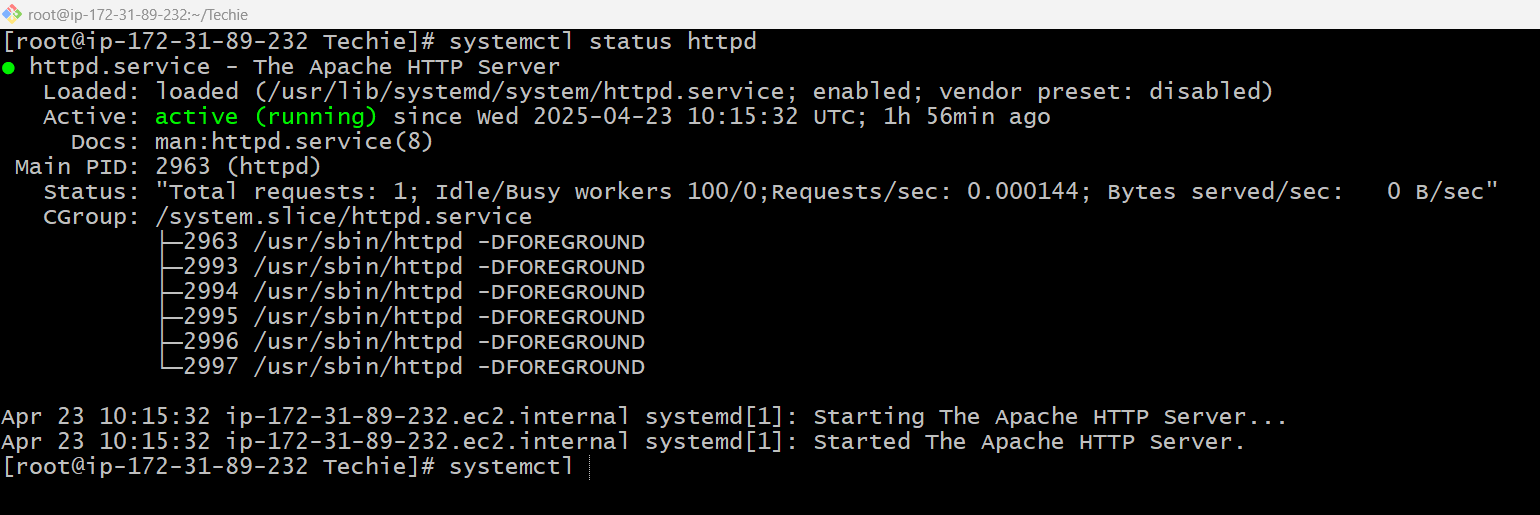


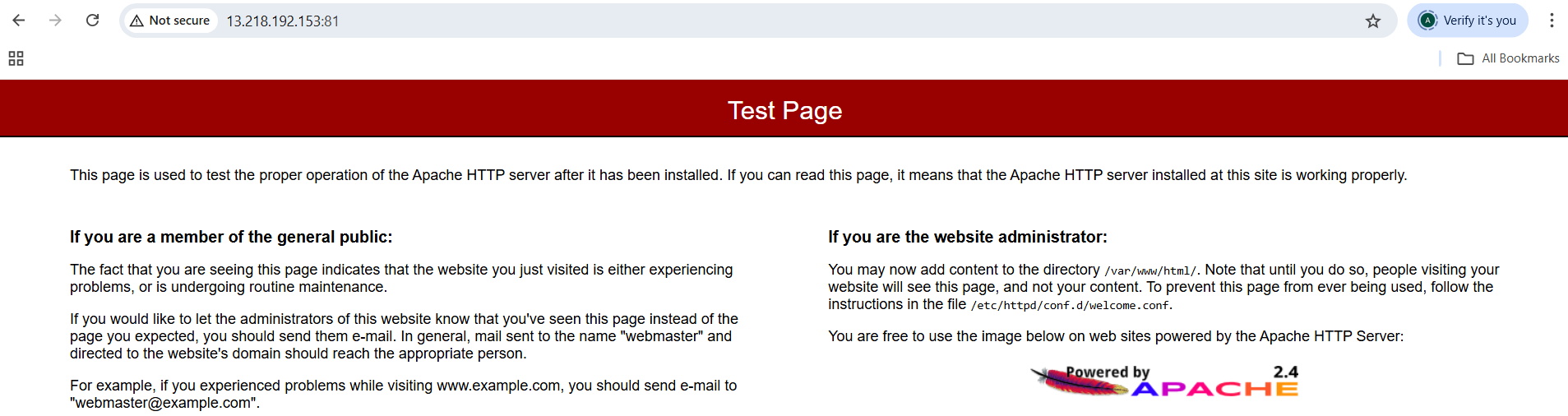
26) Monitor log files using tail or grep

Command: tail -f /var/log/messages



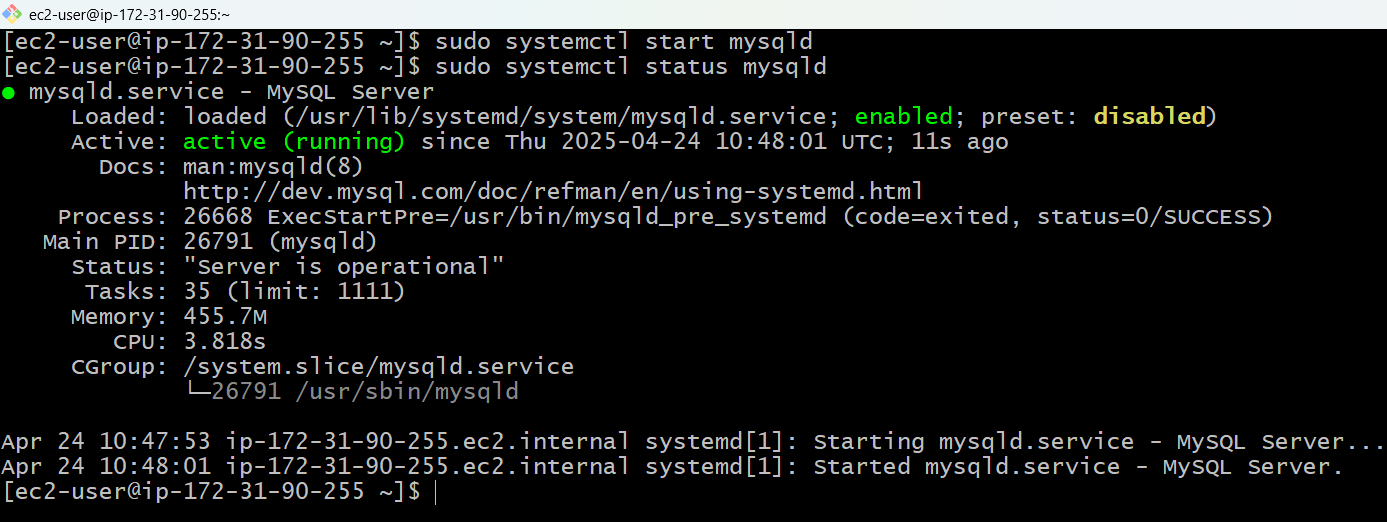
27) Set up a web server (e.g., Apache or Nginx)

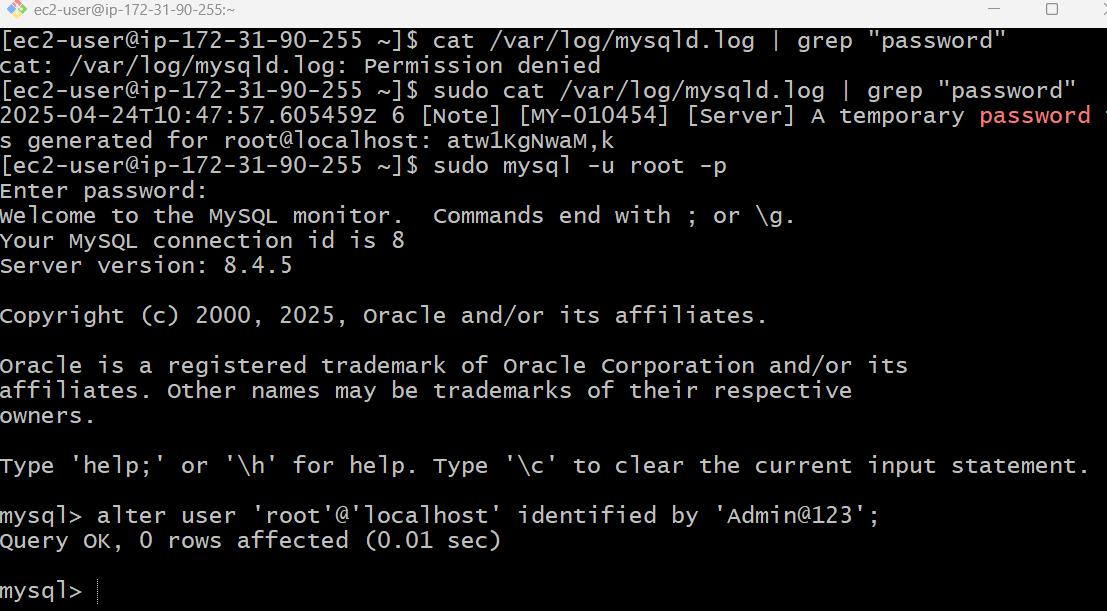


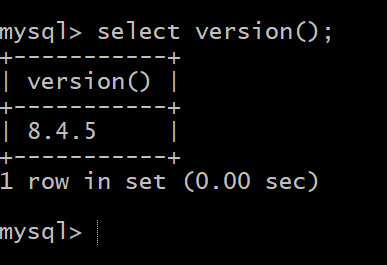
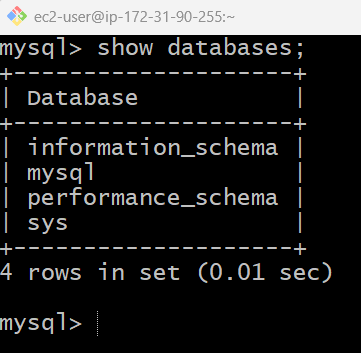


28) Configure and secure a MySQL Database

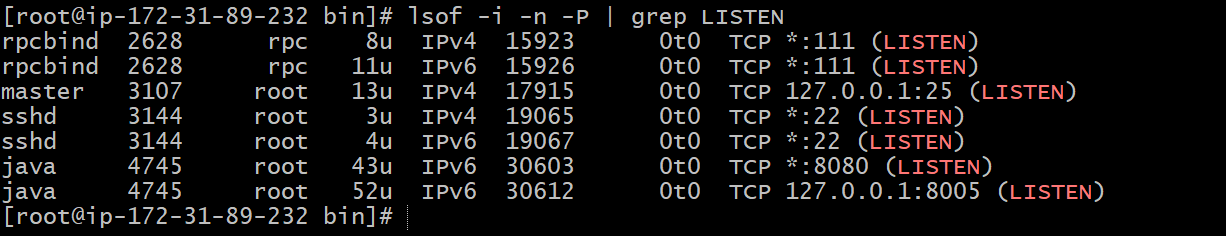
Note: Mysql not installed in Amazon Linux2, mysql work on Amazon Linux 2023

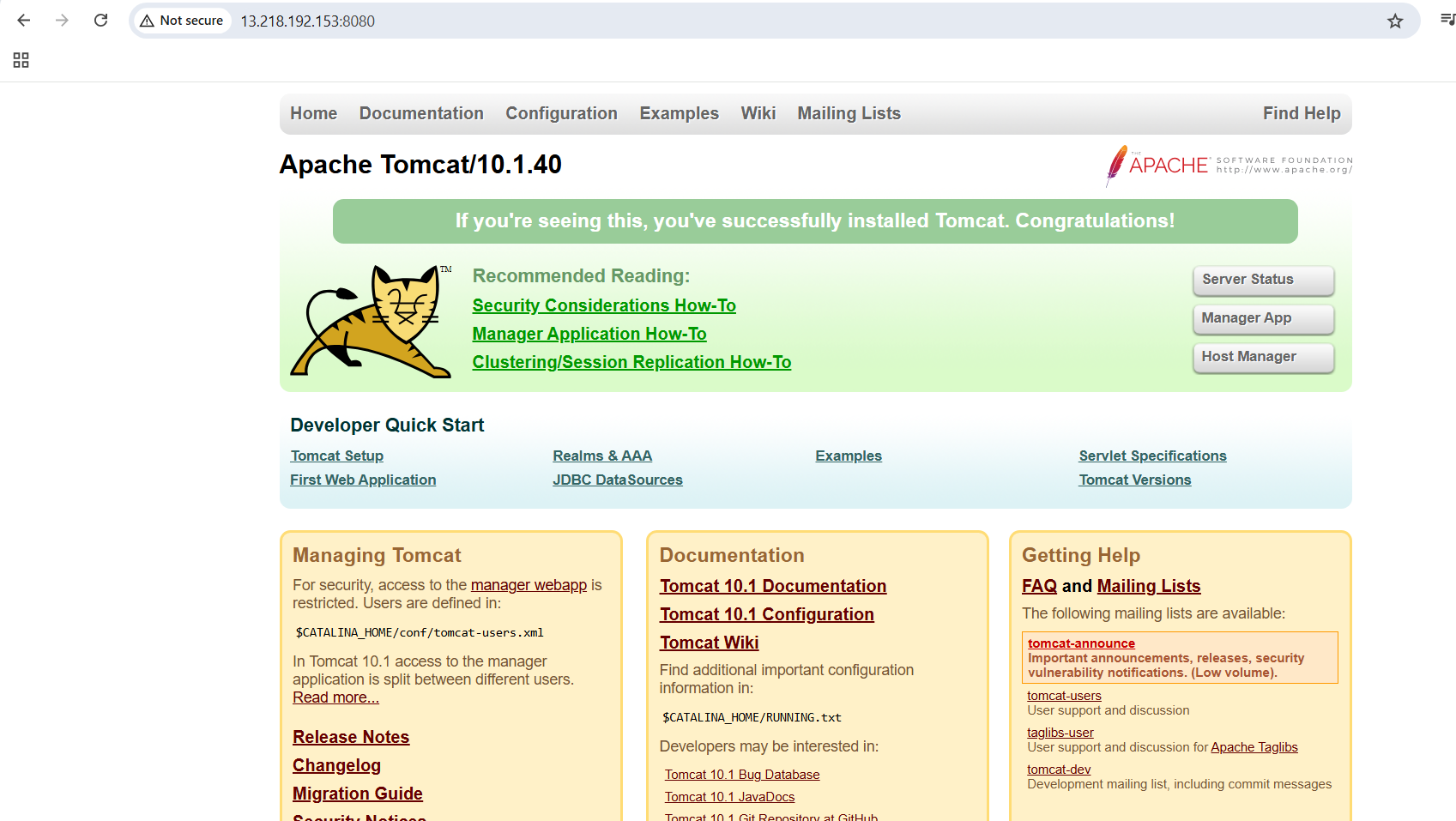






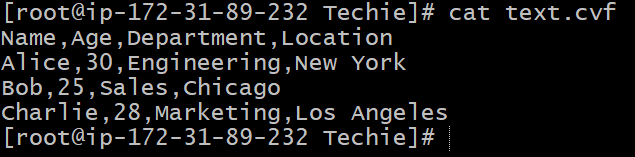
29) Set up a Application Server (e.g.,Apache Tomcat)

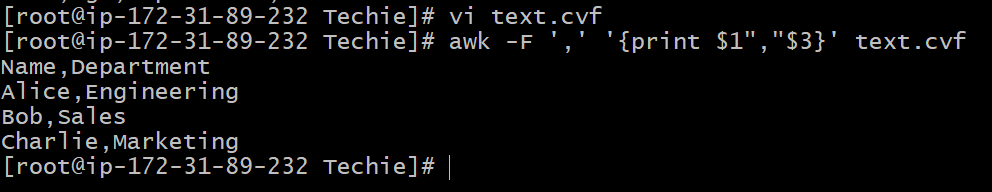




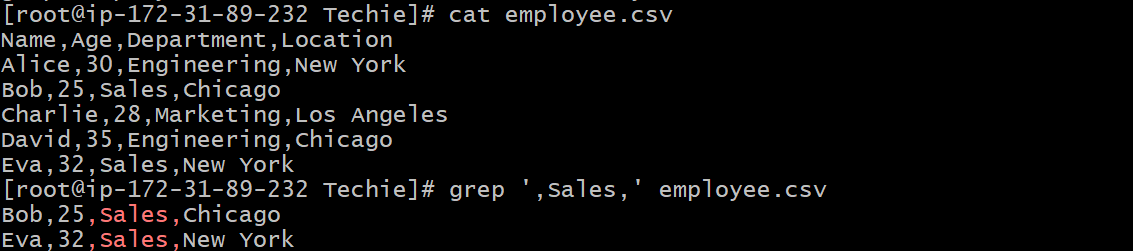
30) create a service file for Apache Tomcat.(Should execute by using systemtctl command)

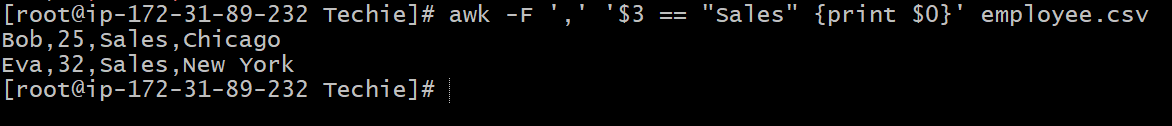
31) Print specific columns from a delimited file



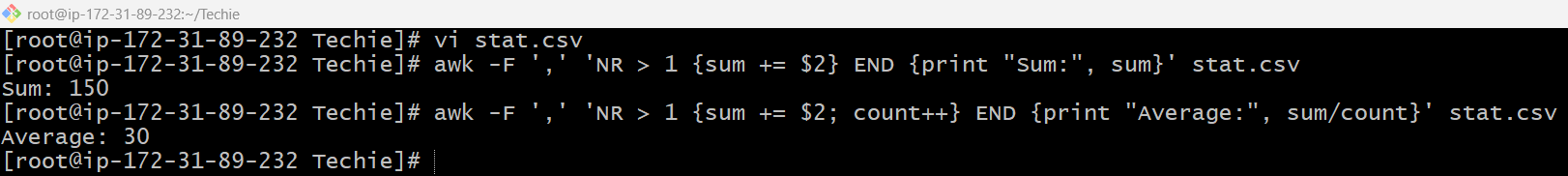


32) Filter and print lines where the Department is Sales.





33) Calculate and print the average, sum, or other statistics of a column.



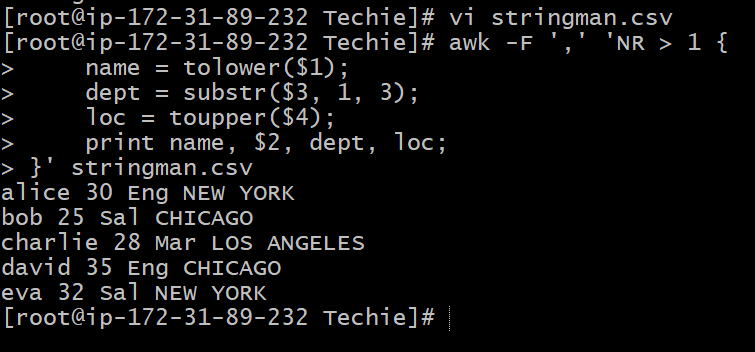
34) Perform string manipulation, such as extracting substrings or changing case

1) Extract the **first 3 letters** of the Department.

2) Convert the Location to **uppercase**.

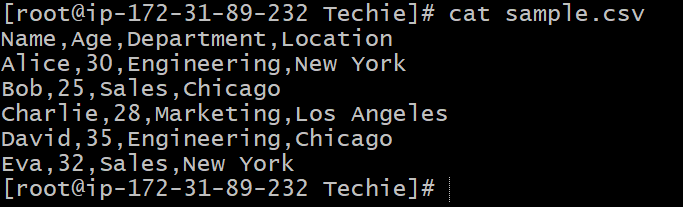
3) Convert the Name to **lowercase**.

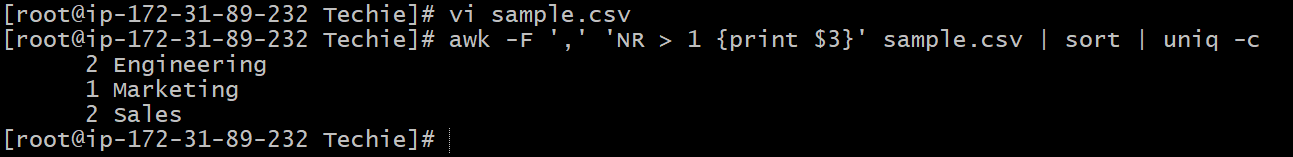
Output:



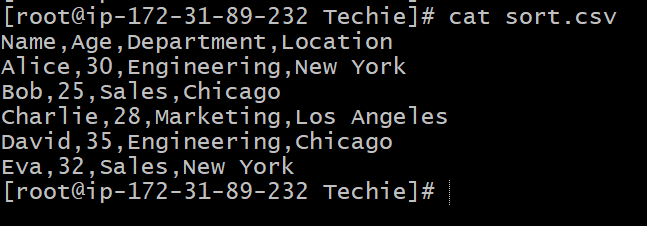
35) Count the occurrences of a specific pattern in a file

**Count how many times each department appears** in the file





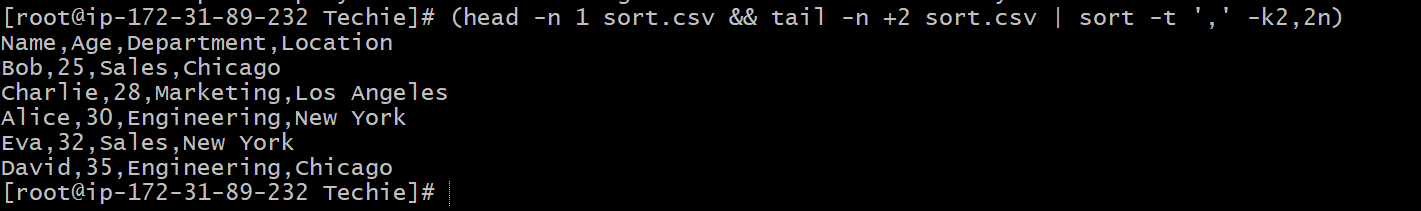
36) Sort lines based on a specific field or column



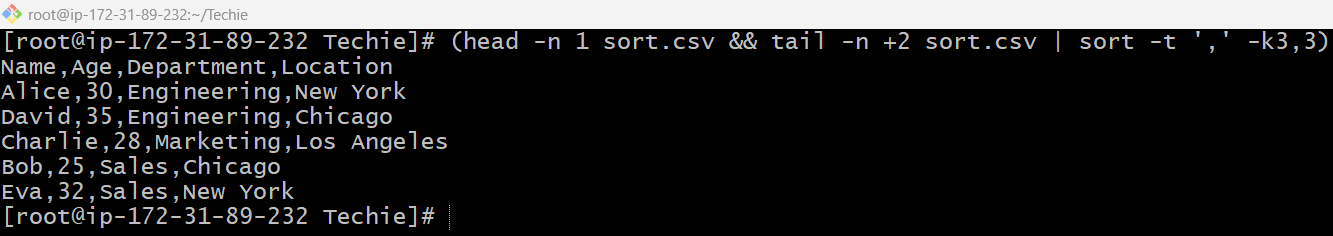
Sort the data by:

* Age (2nd column) — numerically
* Department (3rd column) — alphabetically

1) Sort by Age (column 2) numerically



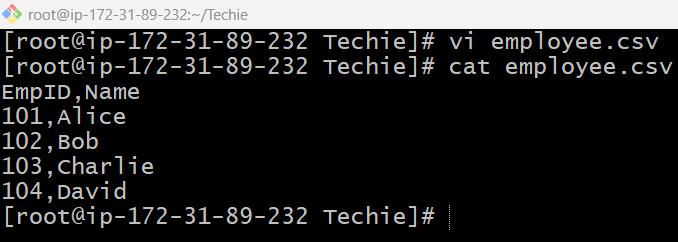
2) Sort by Department (column 3) alphabetically



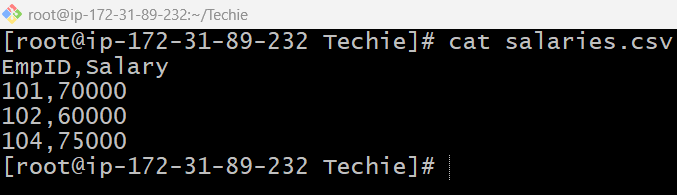
37) Merge multiple files based on a common field or column

Scenario: Merge two CSV files based on a common column

Employee.csv file:



Salaries.csv file:



Goal: Merge files based on EmpID:

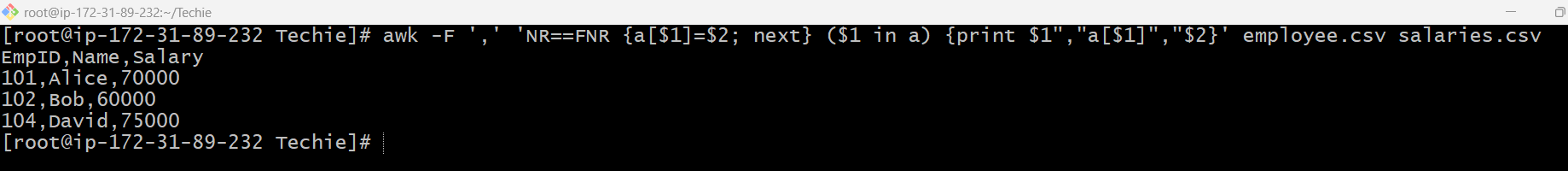
We want the result like this:

EmpID,Name,Salary

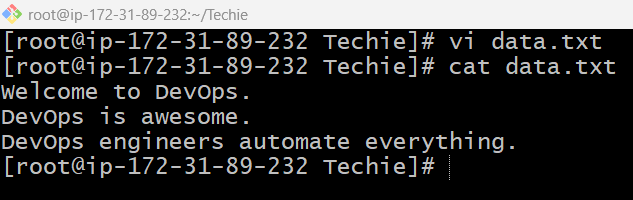
101,Alice,70000

102,Bob,60000

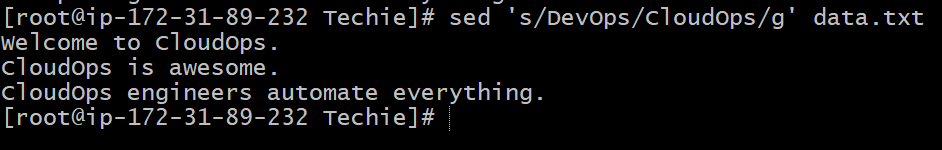
104,David,75000



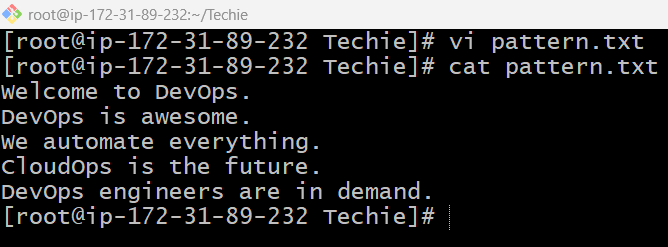
38) Substitute text in a file using search and replace



Replace **"DevOps"** with **"CloudOps"**:

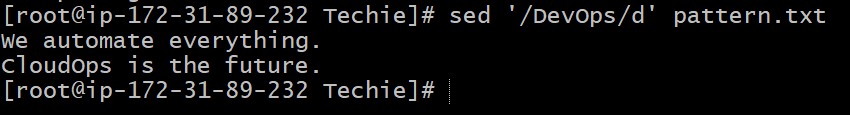


39) Delete specific lines based on a pattern or line number

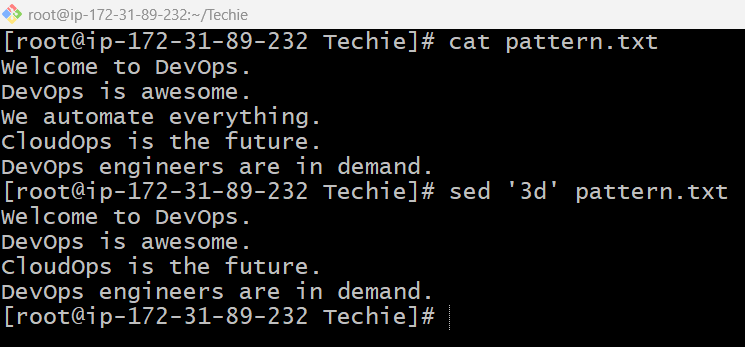


1. Delete lines **containing** the word "DevOps".
2. Delete a specific **line number** (e.g., line 3).

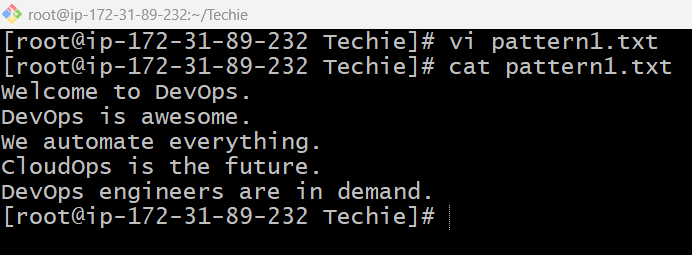
1. Delete lines containing a pattern ("DevOps")



2. Delete a specific line number (e.g., line 3)



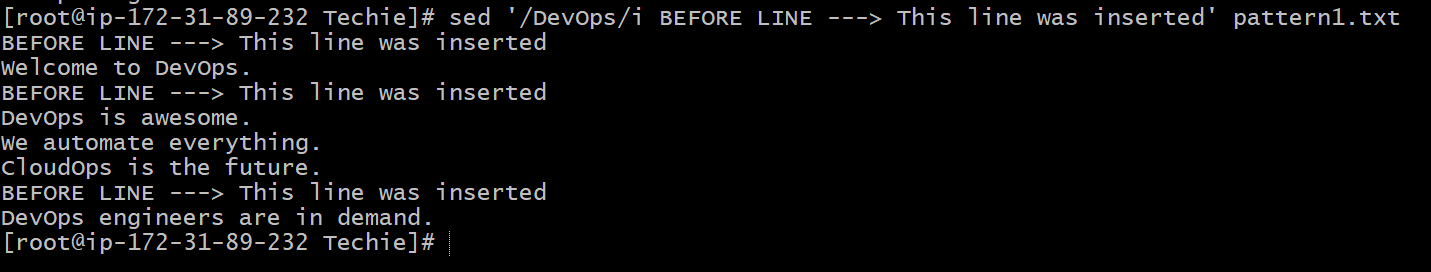
40) Append or insert text before or after a specific pattern or line



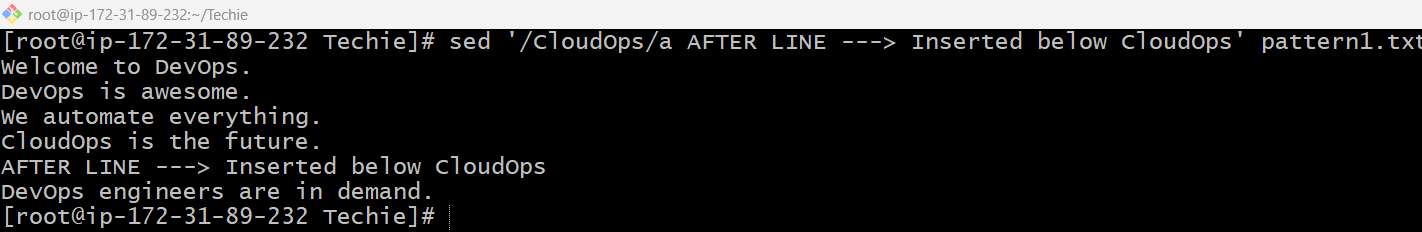
1) **Insert** a line **before** any line that contains "DevOps".

2) **Append** a line **after** a line that contains "CloudOps".

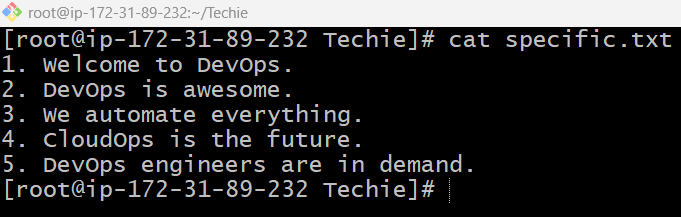
1. Insert text **before** lines matching "DevOps"



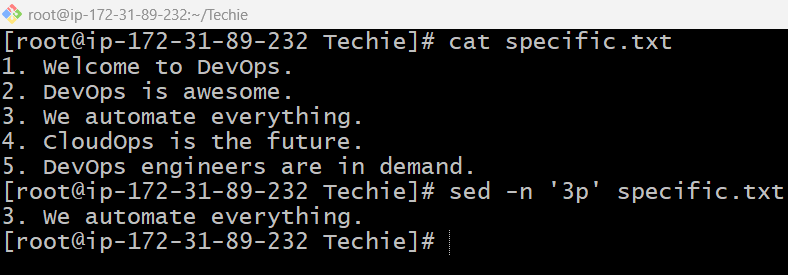
2. Append text **after** a line matching "CloudOps"



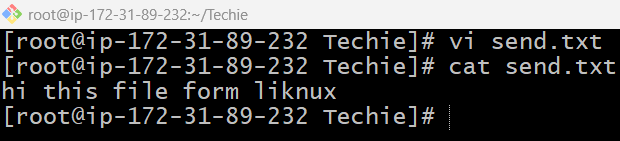
41) Print only specific lines from a file

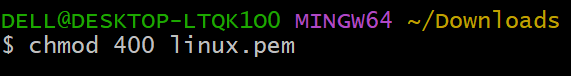


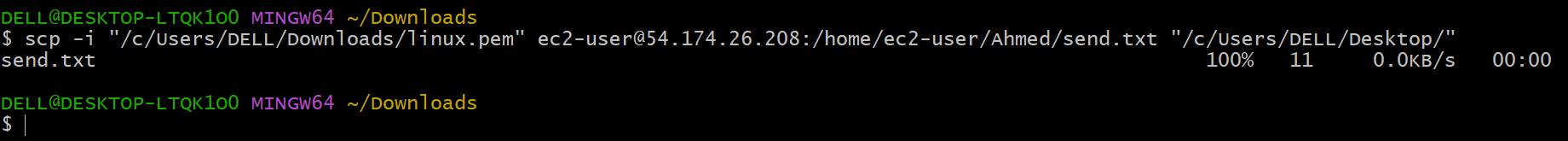
Print a **specific line number** (e.g., line 3



42) Copy file from linux to windows machine

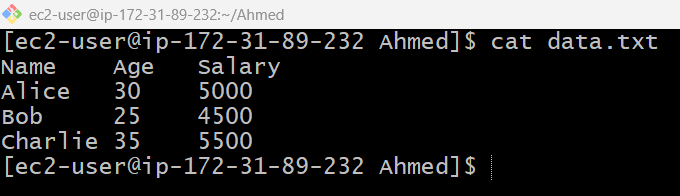






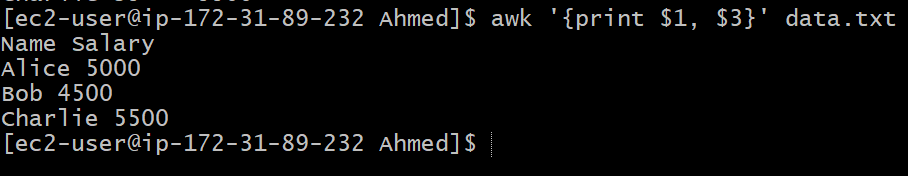


43) 5 use cases for AWK and 5 use cases for sed

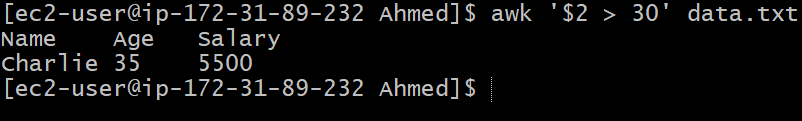


5 use cases for AWK:

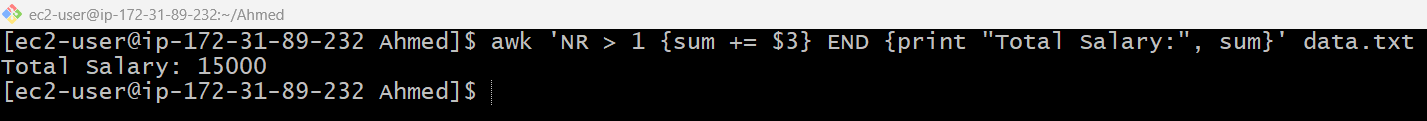
1) Print specific columns (Name and Salary)



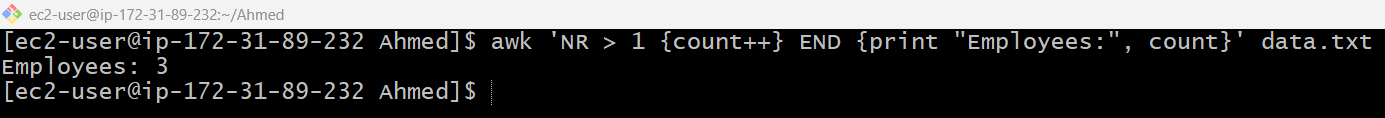
2) Print lines where Age > 30



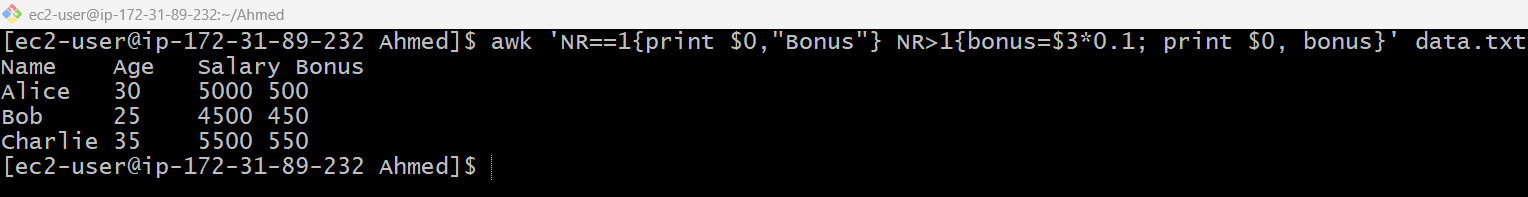
3) Calculate total salary



4) Count number of employees

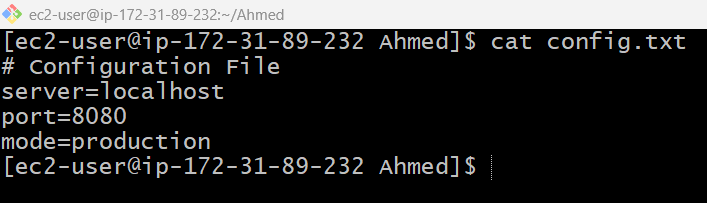


5) Add new column: Bonus (10% of salary)

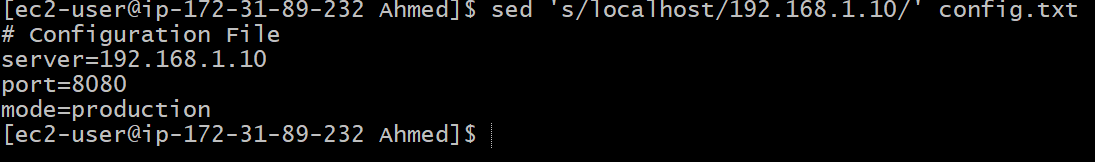


**5 sed Use Cases — With Full Examples**

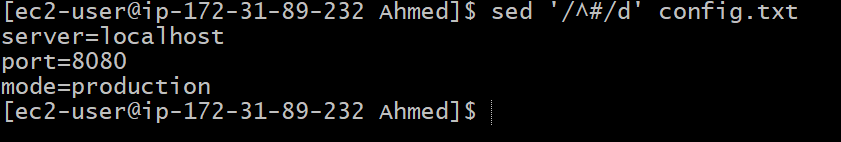
Let’s use a file config.txt:

****

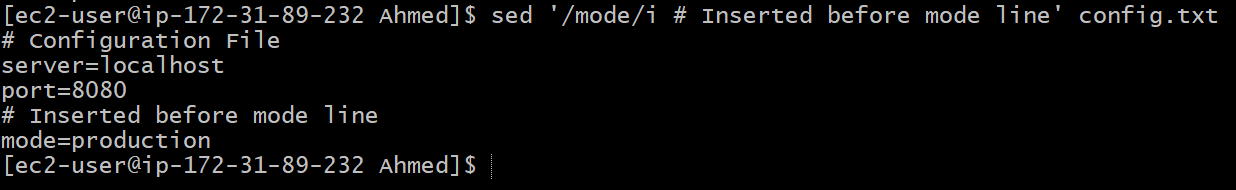
**1)** Replace 'localhost' with IP address

****

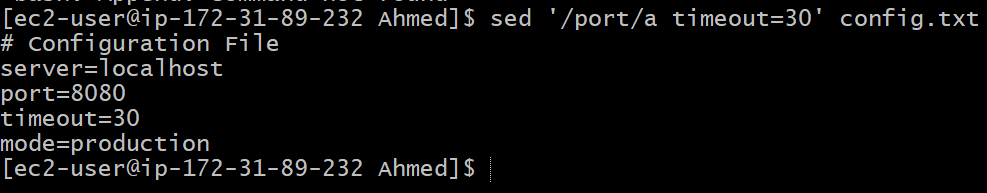
**2)** Delete comment lines (lines starting with #)

****

**3)** Insert a new line before 'mode'

****

4) Append a line after 'port'



5) Edit file in-place (change port)

