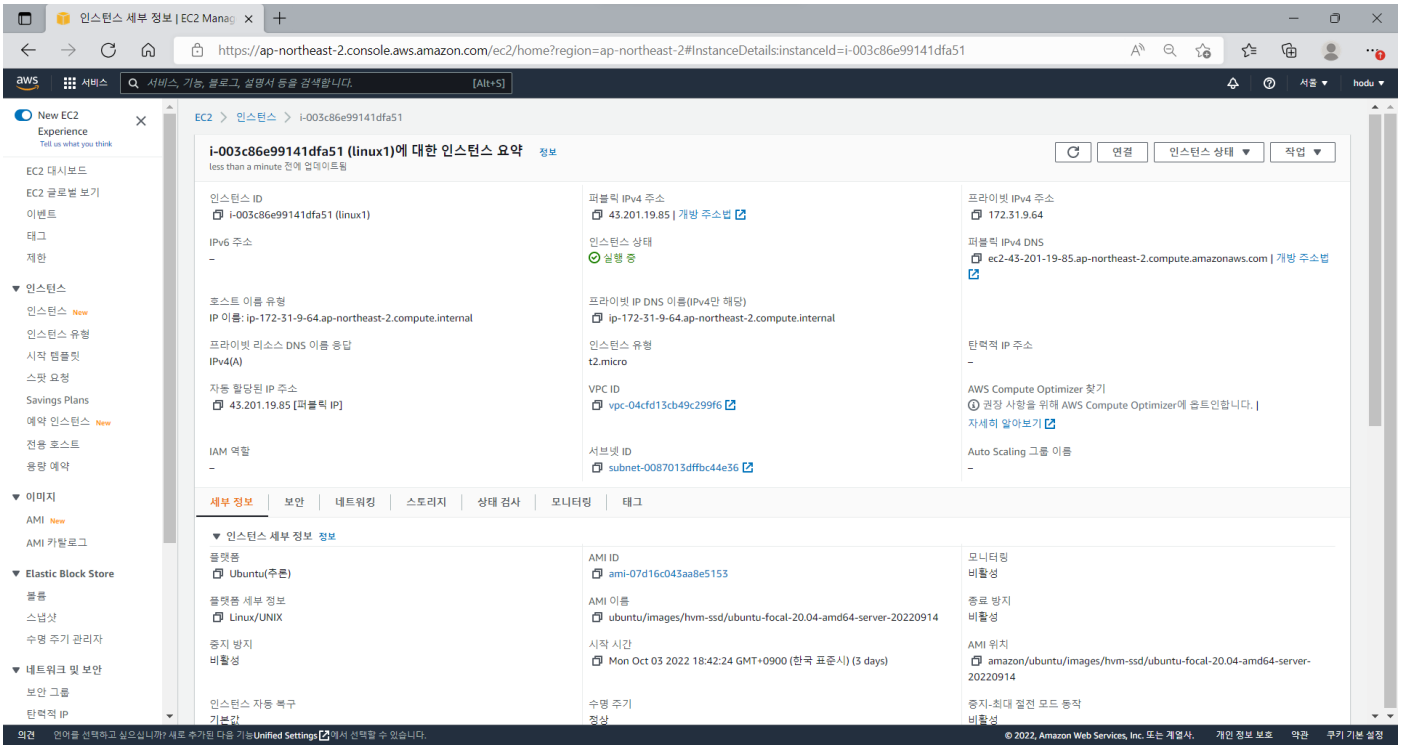
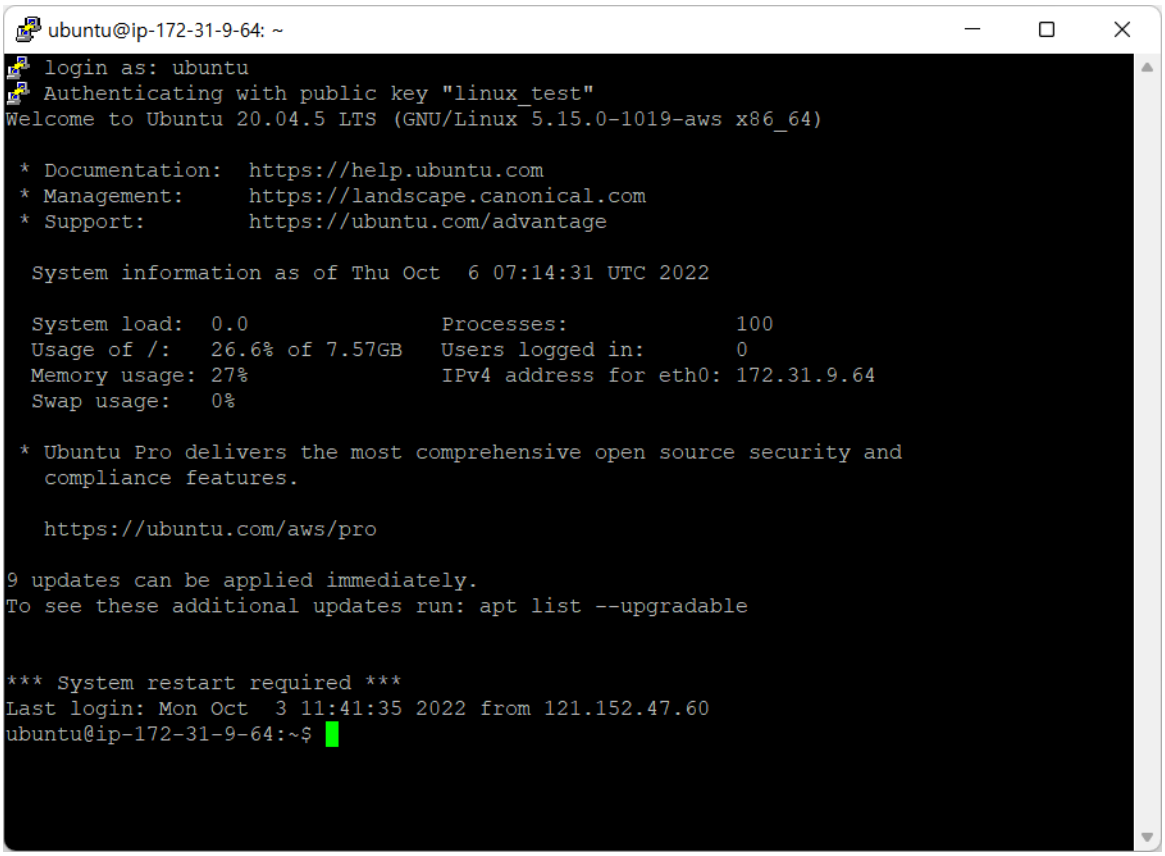
과제 1. 리눅스 보안

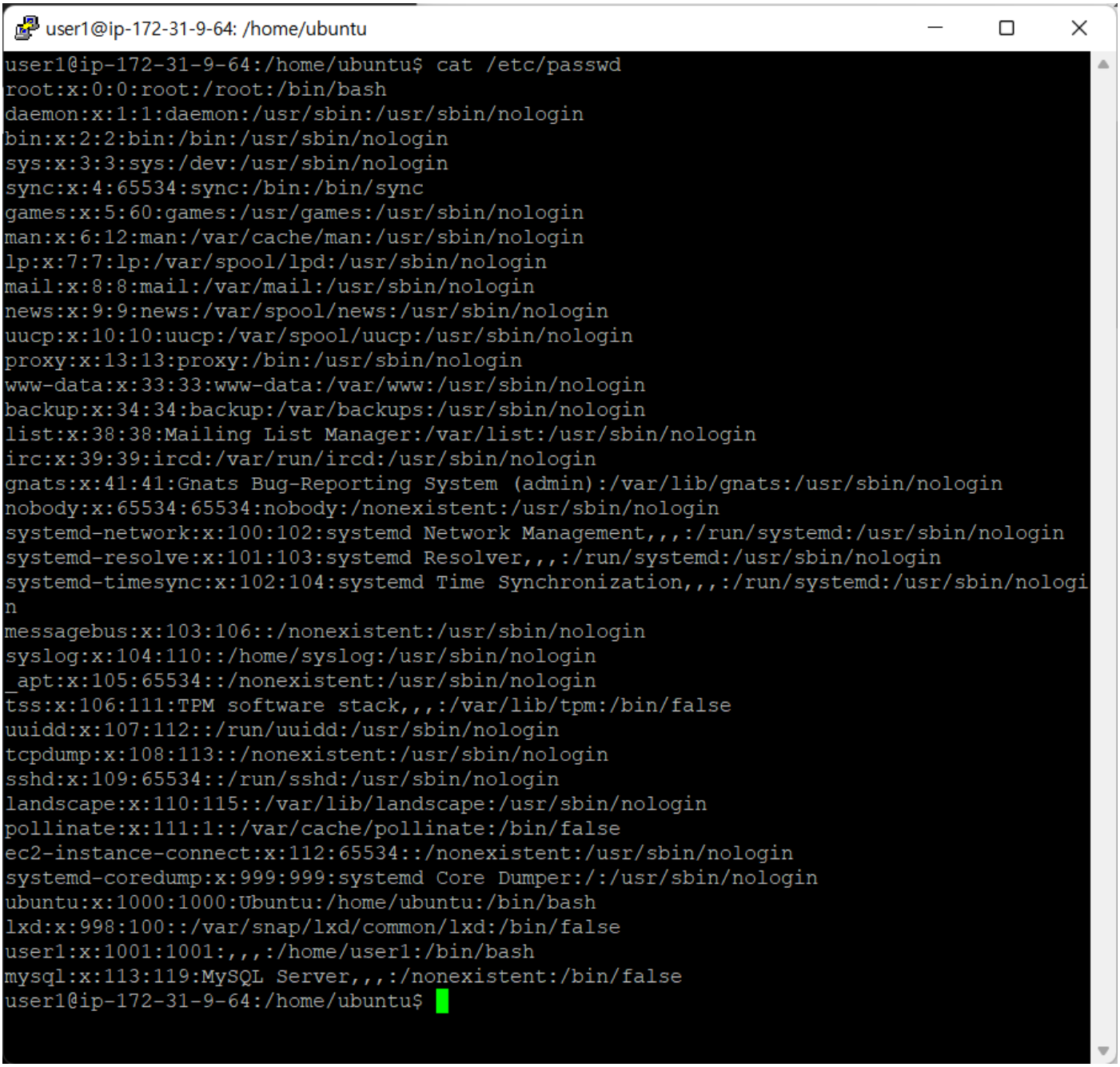
1-1. 리눅스 시스템 구성하기



1-2. putty로 리눅스 연결



2. 계정 생성


user1@ip-172-31-9-64: /home/ubuntu
user1@ip-172-31-9-64:/home/ubuntu$ cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin
systemd-timesync:x:102:104:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologi
n
messagebus:x:103:106::/nonexistent:/usr/sbin/nologin
syslog:x:104:110::/home/syslog:/usr/sbin/nologin
_apt:x:105:65534::/nonexistent:/usr/sbin/nologin
tss:x:106:111:TPM software stack,,,:/var/lib/tpm:/bin/false
uuidd:x:107:112::/run/uuidd:/usr/sbin/nologin
tcpdump:x:108:113::/nonexistent:/usr/sbin/nologin
sshd:x:109:65534::/run/sshd:/usr/sbin/nologin
landscape:x:110:115::/var/lib/landscape:/usr/sbin/nologin
pollinate:x:111:1::/var/cache/pollinate:/bin/false
ec2-instance-connect:x:112:65534::/nonexistent:/usr/sbin/nologin
systemd-coredump:x:999:999:systemd Core Dumper:/:/usr/sbin/nologin
ubuntu:x:1000:1000:Ubuntu:/home/ubuntu:/bin/bash
lxd:x:998:100::/var/snap/lxd/common/lxd:/bin/false
user1:x:1001:1001:,,,:/home/user1:/bin/bash
mysql:x:113:119:MySQL Server,,,:/nonexistent:/bin/false
user1@ip-172-31-9-64:/home/ubuntu$

3-1. mysql 설치 및 구동

```
ubuntu@ip-172-31-9-64: ~
ubuntu@ip-172-31-9-64:~$ sudo mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 10
Server version: 8.0.30-0ubuntu0.20.04.2 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> select host, user from mysql.user;
+-----------+------------------+
| host      | user             |
+-----------+------------------+
| %         | user2            |
| localhost | debian-sys-maint |
| localhost | mysql.infoschema |
| localhost | mysql.session    |
| localhost | mysql.sys        |
| localhost | root             |
+-----------+------------------+
6 rows in set (0.00 sec)

mysql>
```
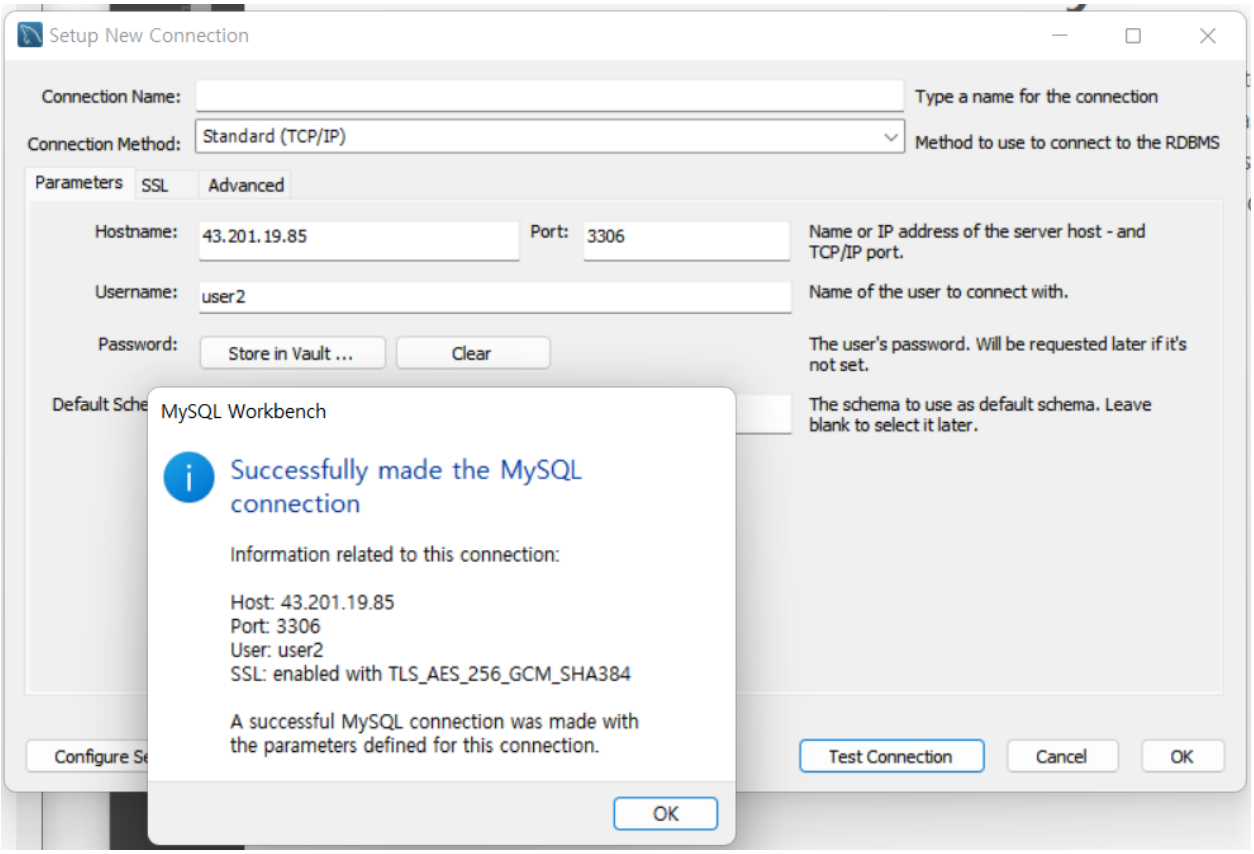
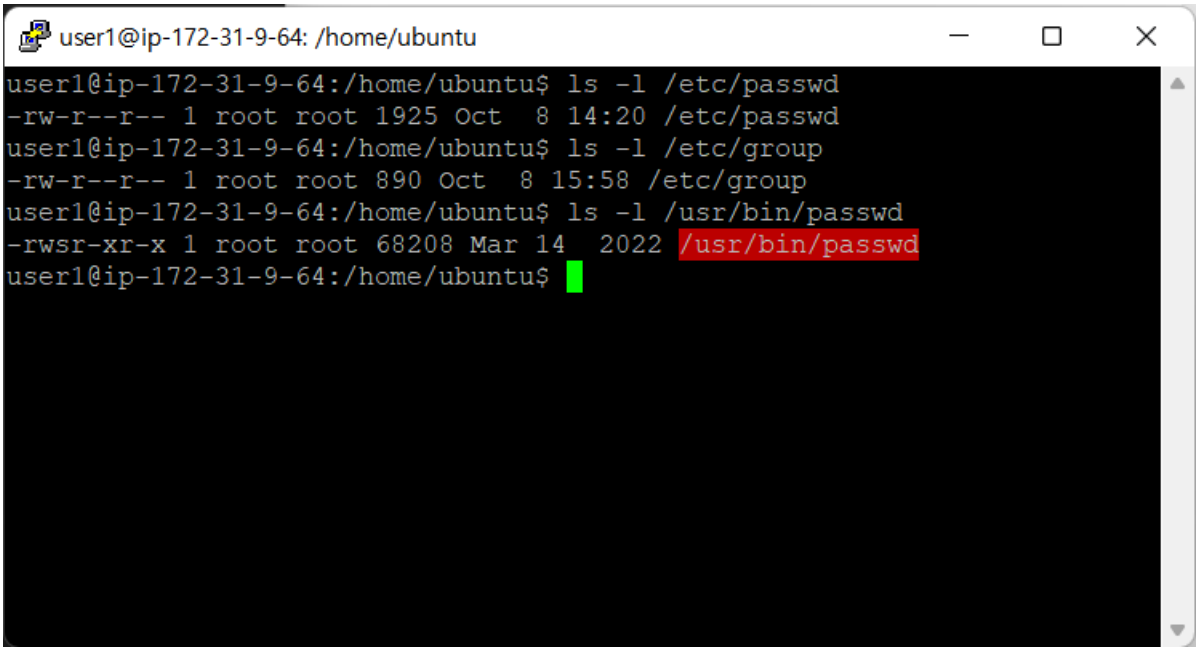

3-2. workbench로 mysql 서버 접속

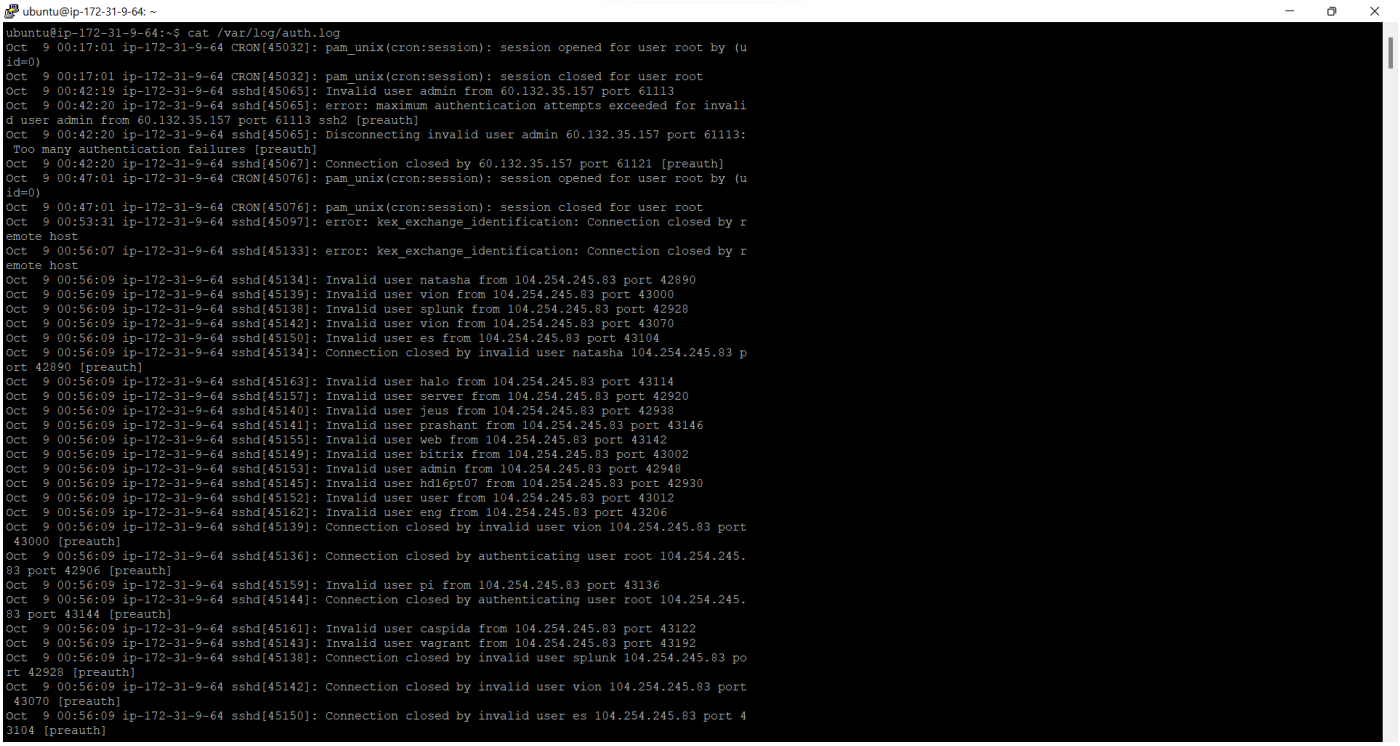


3-3. apache 설치 및 서버 접속

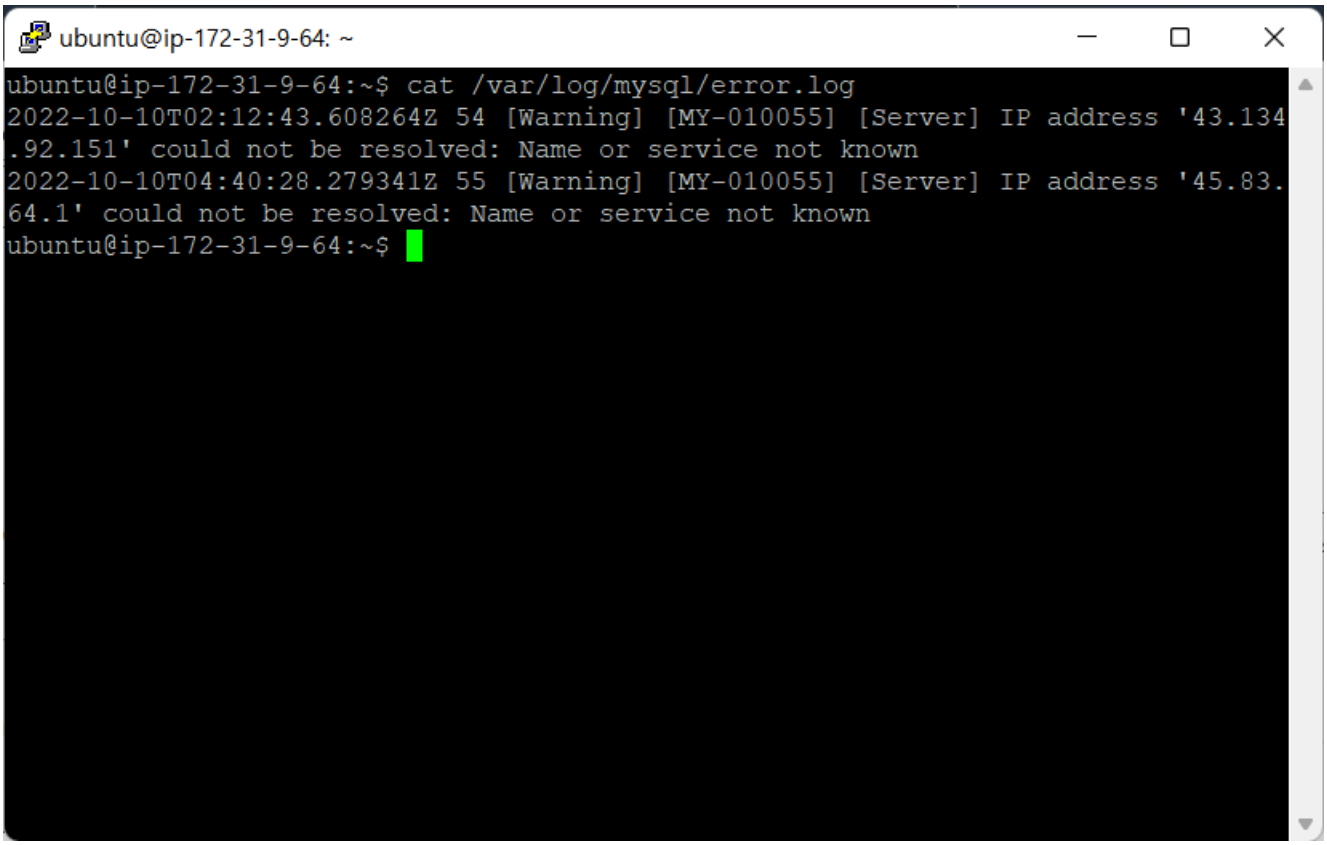
4. 파일의 접근 권한 확인



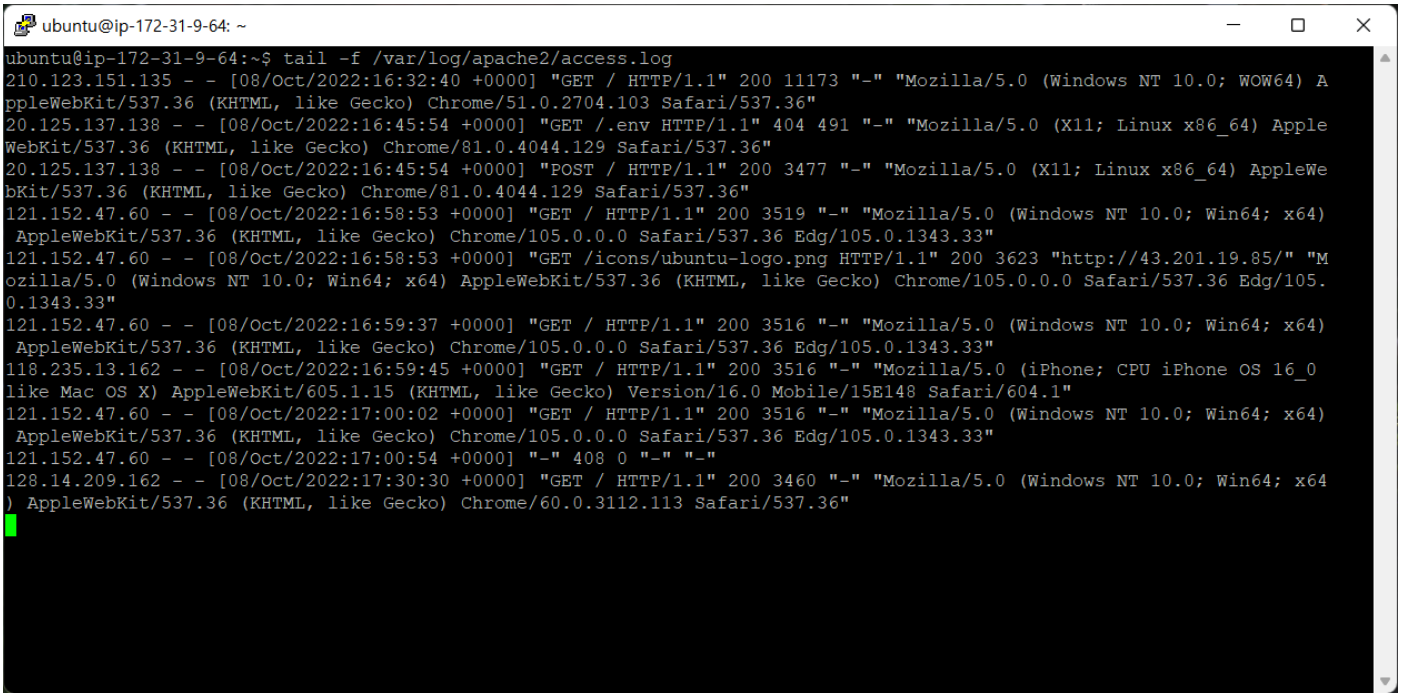
5-1. 리눅스 로그 파일 확인



5-2. mysql 에러 로그 파일 확인



6. 웹 서버 로그 파일 확인


ubuntu@ip-172-31-9-64: ~
ubuntu@ip-172-31-9-64:~$ tail -f /var/log/apache2/access.log
210.123.151.135 - - [08/Oct/2022:16:32:40 +0000] "GET / HTTP/1.1" 200 11173 "-" "Mozilla/5.0 (Windows NT 10.0; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/51.0.2704.103 Safari/537.36"
20.125.137.138 - - [08/Oct/2022:16:45:54 +0000] "GET /.env HTTP/1.1" 404 491 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/81.0.4044.129 Safari/537.36"
20.125.137.138 - - [08/Oct/2022:16:45:54 +0000] "POST / HTTP/1.1" 200 3477 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/81.0.4044.129 Safari/537.36"
121.152.47.60 - - [08/Oct/2022:16:58:53 +0000] "GET / HTTP/1.1" 200 3519 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/105.0.0.0 Safari/537.36 Edg/105.0.1343.33"
121.152.47.60 - - [08/Oct/2022:16:58:53 +0000] "GET /icons/ubuntu-logo.png HTTP/1.1" 200 3623 "http://43.201.19.85/" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/105.0.0.0 Safari/537.36 Edg/105.0.1343.33"
121.152.47.60 - - [08/Oct/2022:16:59:37 +0000] "GET / HTTP/1.1" 200 3516 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/105.0.0.0 Safari/537.36 Edg/105.0.1343.33"
118.235.13.162 - - [08/Oct/2022:16:59:45 +0000] "GET / HTTP/1.1" 200 3516 "-" "Mozilla/5.0 (iPhone; CPU iPhone OS 16_0 like Mac OS X) AppleWebKit/605.1.15 (KHTML, like Gecko) Version/16.0 Mobile/15E148 Safari/604.1"
121.152.47.60 - - [08/Oct/2022:17:00:02 +0000] "GET / HTTP/1.1" 200 3516 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/105.0.0.0 Safari/537.36 Edg/105.0.1343.33"
121.152.47.60 - - [08/Oct/2022:17:00:54 +0000] "-" 408 0 "-" "-"
128.14.209.162 - - [08/Oct/2022:17:30:30 +0000] "GET / HTTP/1.1" 200 3460 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/60.0.3112.113 Safari/537.36"