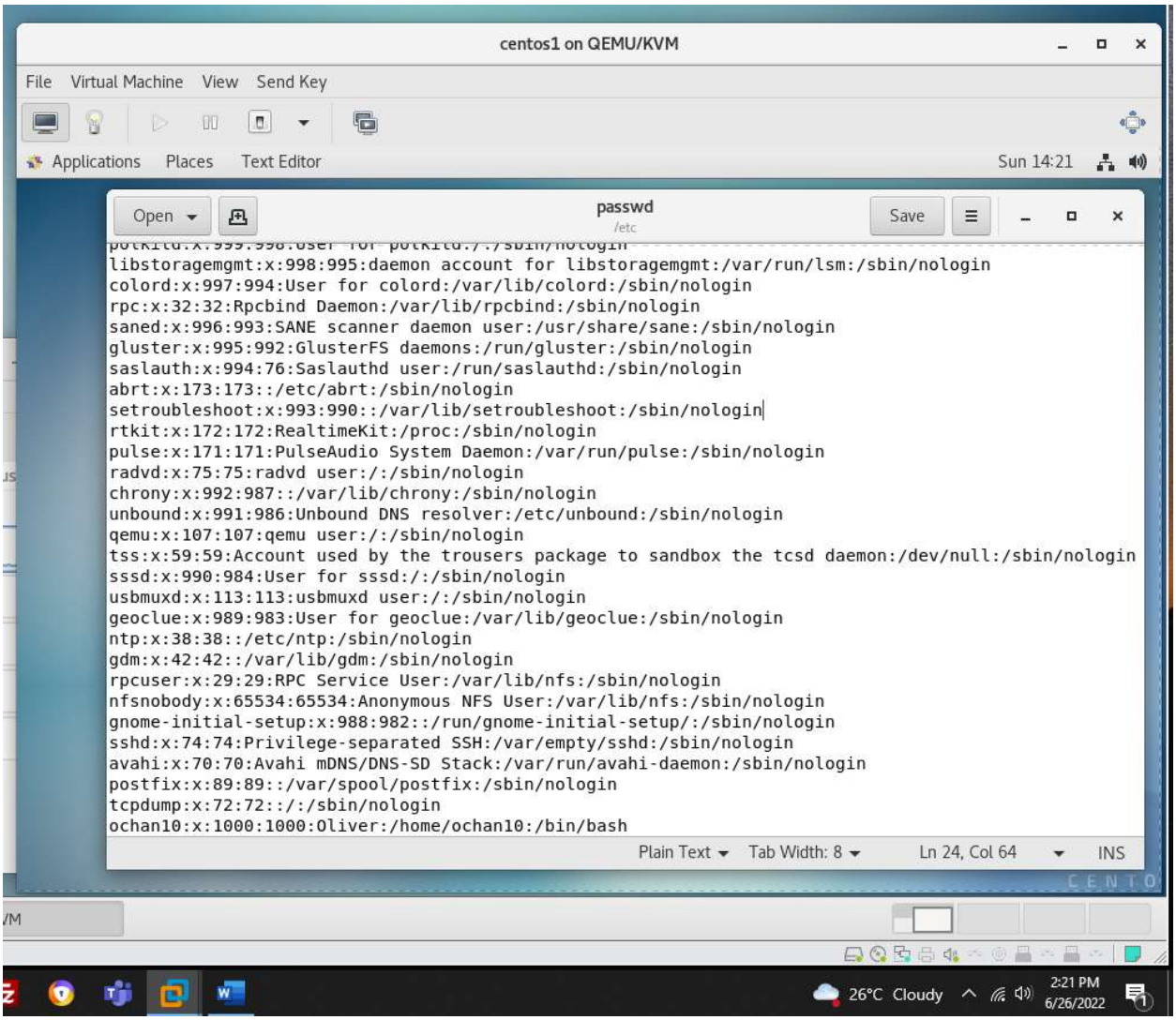
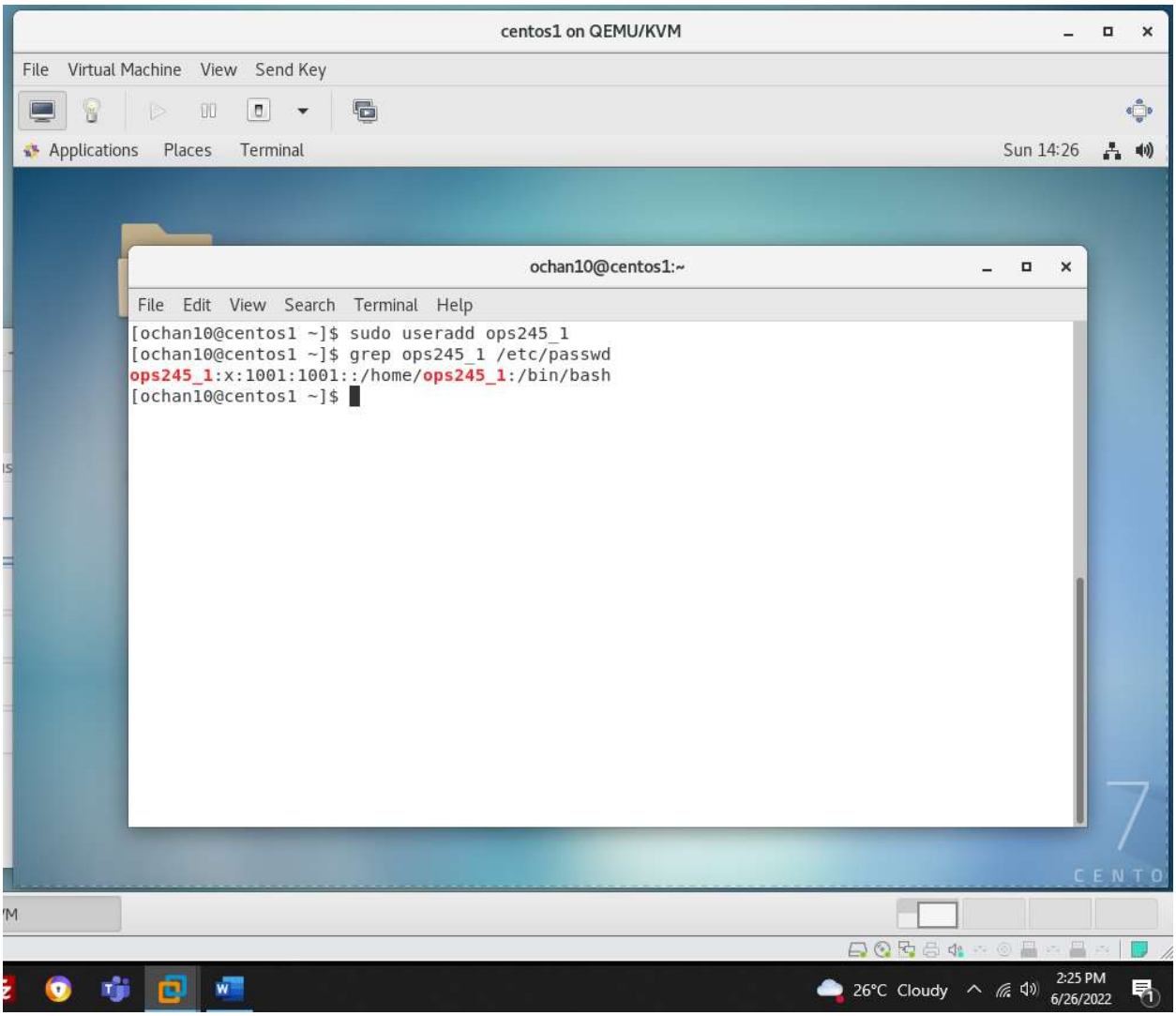
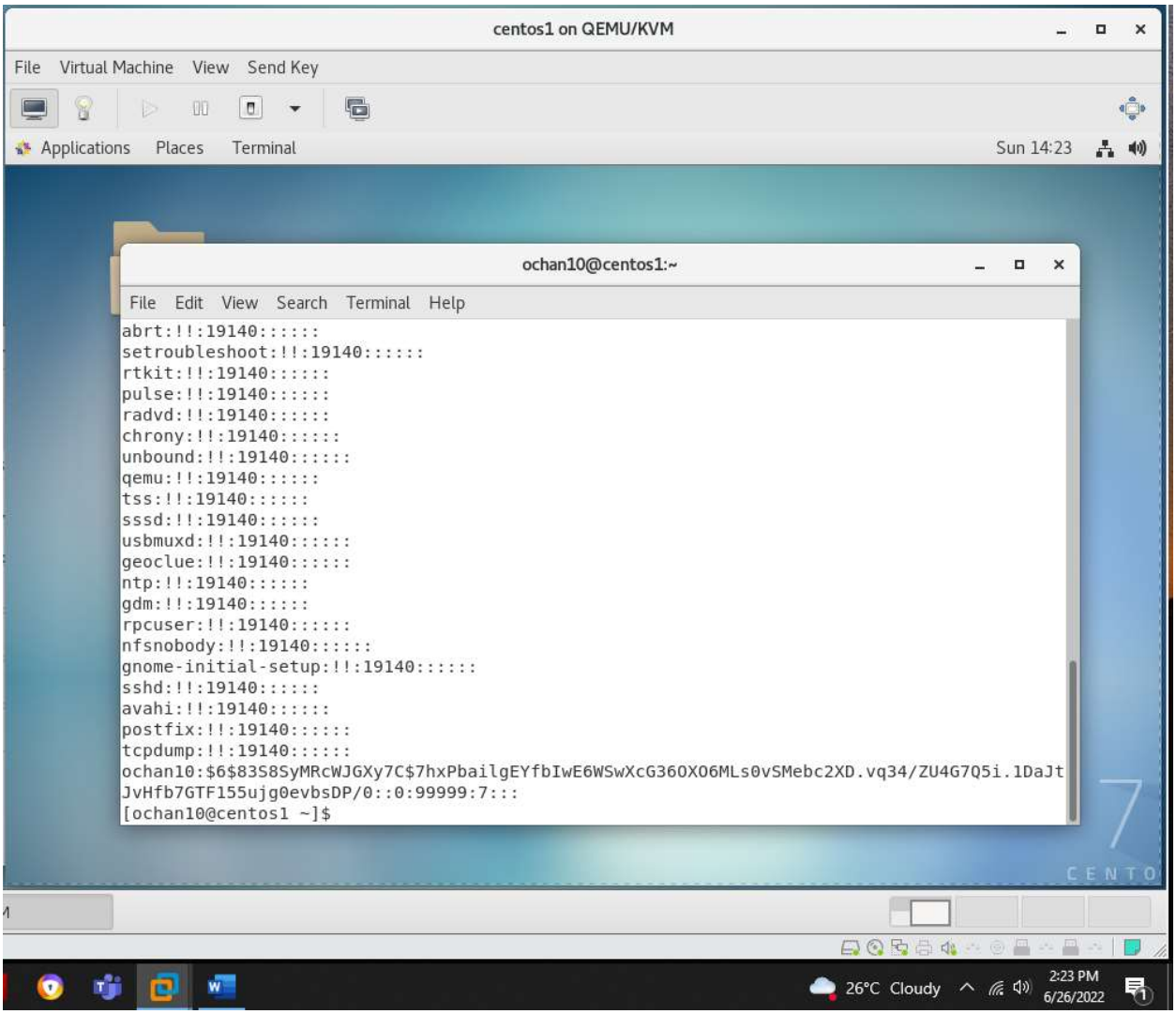
Investigation 1:

/etc/passwd

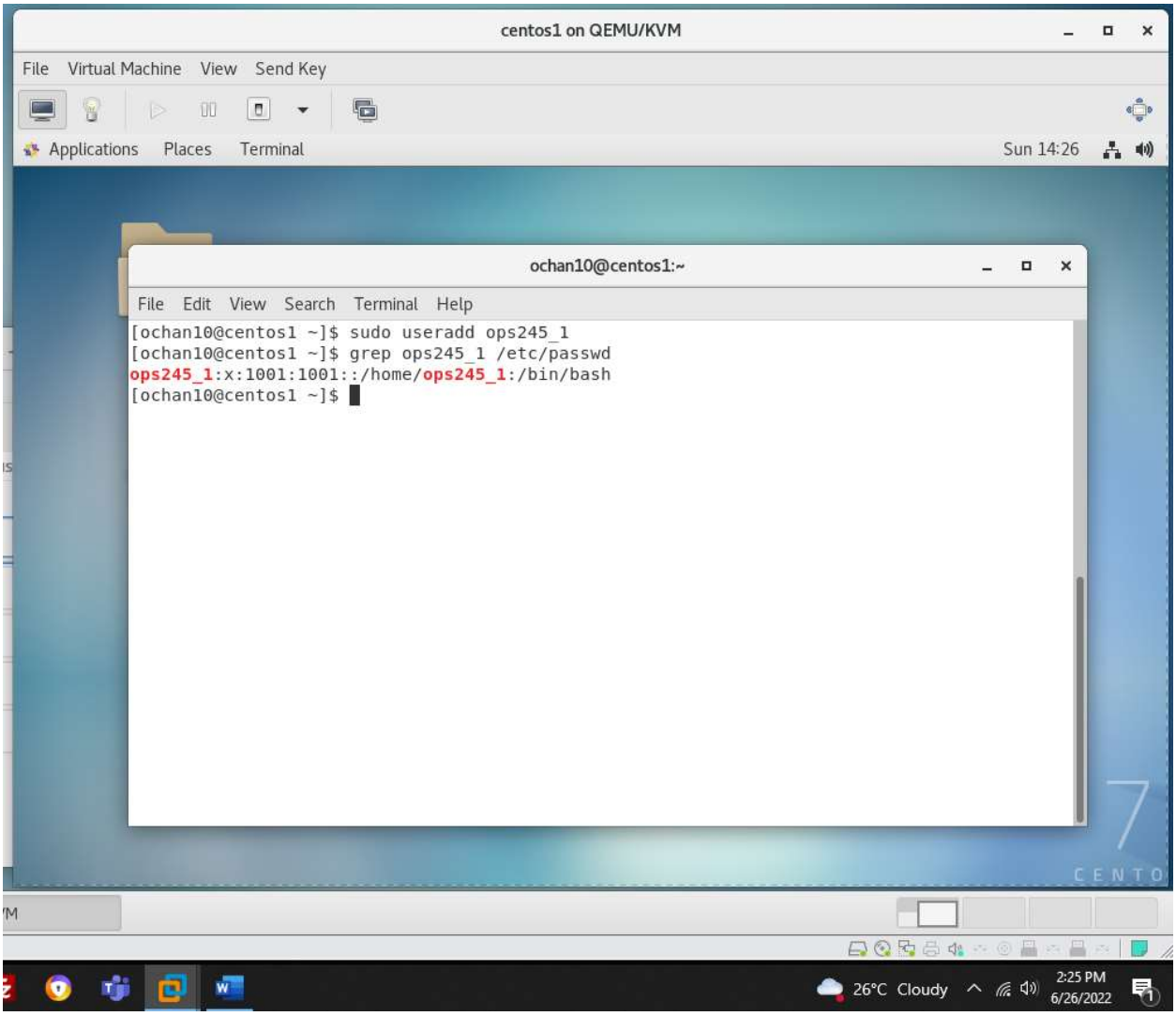



centos1 on QEMU/KVM
File Virtual Machine View Send Key
Applications Places Terminal
Sun 14:26
ochan10@centos1:~
File Edit View Search Terminal Help
[ochan10@centos1 ~]$ sudo useradd ops245_1
[ochan10@centos1 ~]$ grep ops245_1 /etc/passwd
ops245_1:x:1001:1001::/home/ops245_1:/bin/bash
[ochan10@centos1 ~]$
26°C Cloudy
2:25 PM
6/26/2022

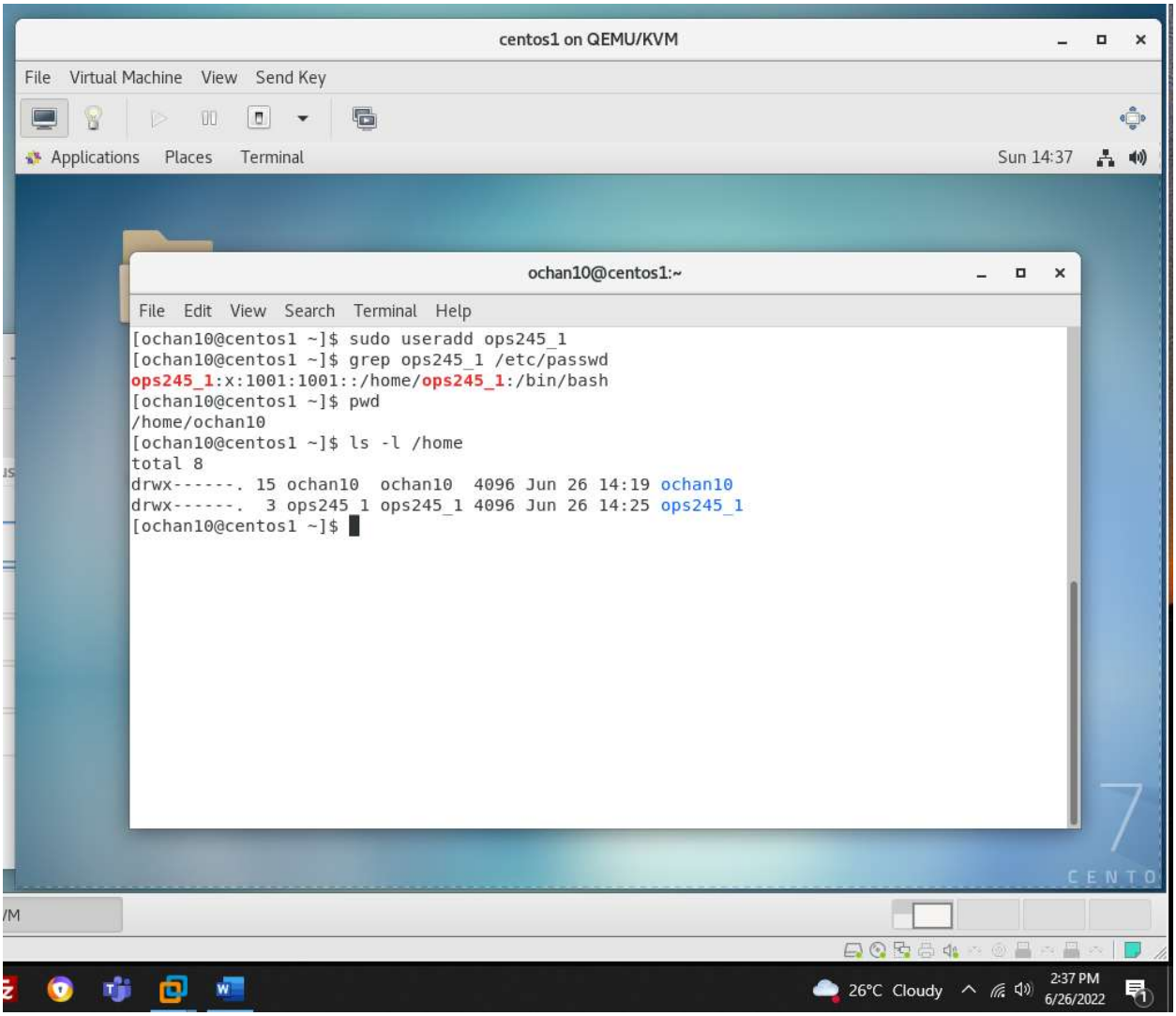
/etc/shadow


centos1 on QEMU/KVM
File Virtual Machine View Send Key
Applications Places Terminal
Sun 14:23
ochan10@centos1:~
File Edit View Search Terminal Help
abrt:!!:19140::::::
setroubleshoot:!!:19140::::::
rtkit:!!:19140::::::
pulse:!!:19140::::::
radvd:!!:19140::::::
chrony:!!:19140::::::
unbound:!!:19140::::::
qemu:!!:19140::::::
tss:!!:19140::::::
sssd:!!:19140::::::
usbmuxd:!!:19140::::::
geoclue:!!:19140::::::
ntp:!!:19140::::::
gdm:!!:19140::::::
rpcuser:!!:19140::::::
nfsnobody:!!:19140::::::
gnome-initial-setup:!!:19140::::::
sshd:!!:19140::::::
avahi:!!:19140::::::
postfix:!!:19140::::::
tcpdump:!!:19140::::::
ochan10:$6$83S8SyMRcWJGXy7C$7hxPbailgEYfbIwE6WSwXcG36OXO6MLs0vSMebc2XD.vq34/ZU4G7Q5i.1DaJt
JvHfb7GTF155ujg0evbsDP/0::0:99999:7:::
[ochan10@centos1 ~]$
26°C Cloudy
2:23 PM
6/26/2022

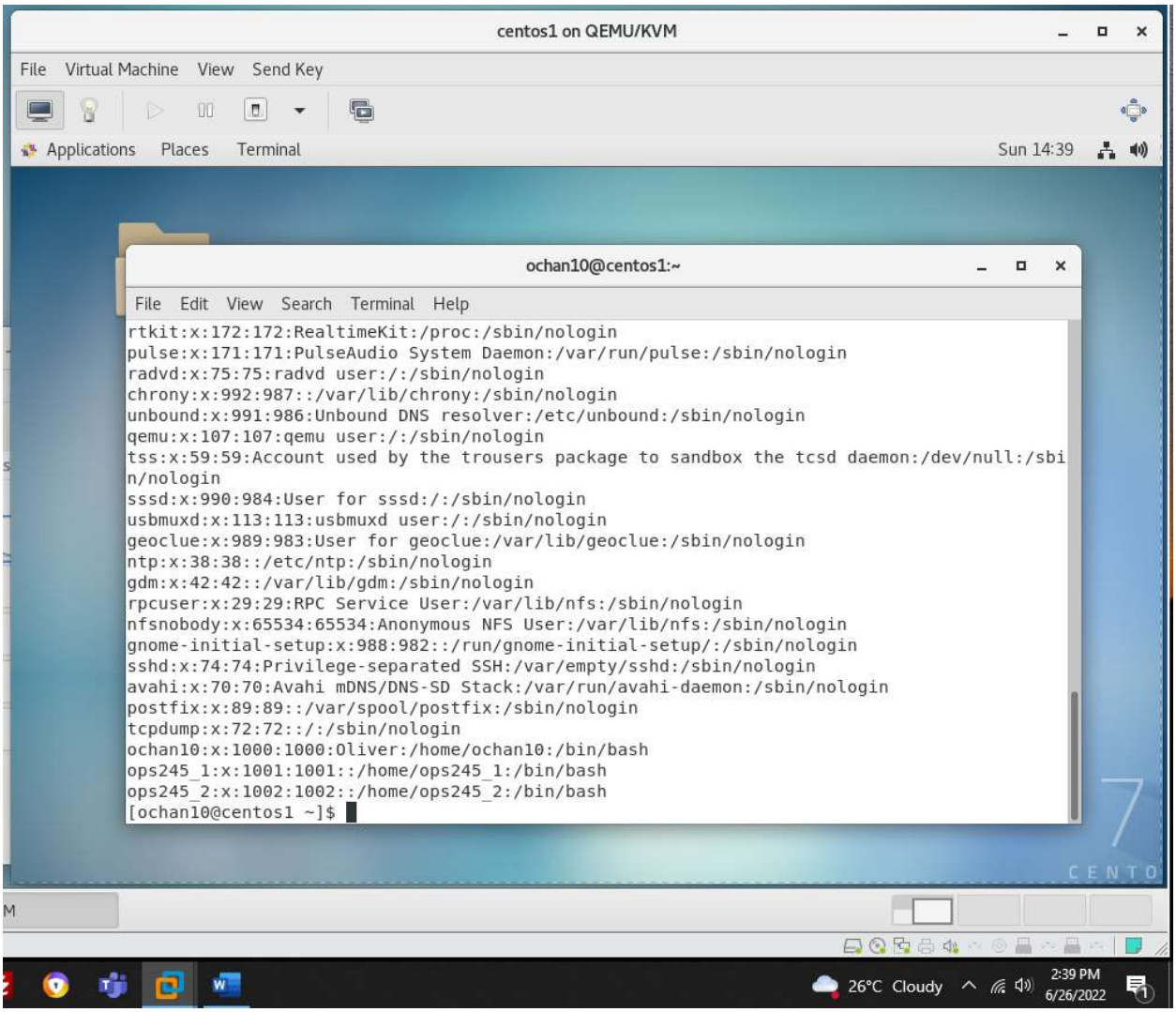
Useradd:


centos1 on QEMU/KVM
File Virtual Machine View Send Key
Applications Places Terminal
Sun 14:26
ochan10@centos1:~
File Edit View Search Terminal Help
[ochan10@centos1 ~]$ sudo useradd ops245_1
[ochan10@centos1 ~]$ grep ops245_1 /etc/passwd
ops245_1:x:1001:1001::/home/ops245_1:/bin/bash
[ochan10@centos1 ~]$
26°C Cloudy
2:25 PM
6/26/2022

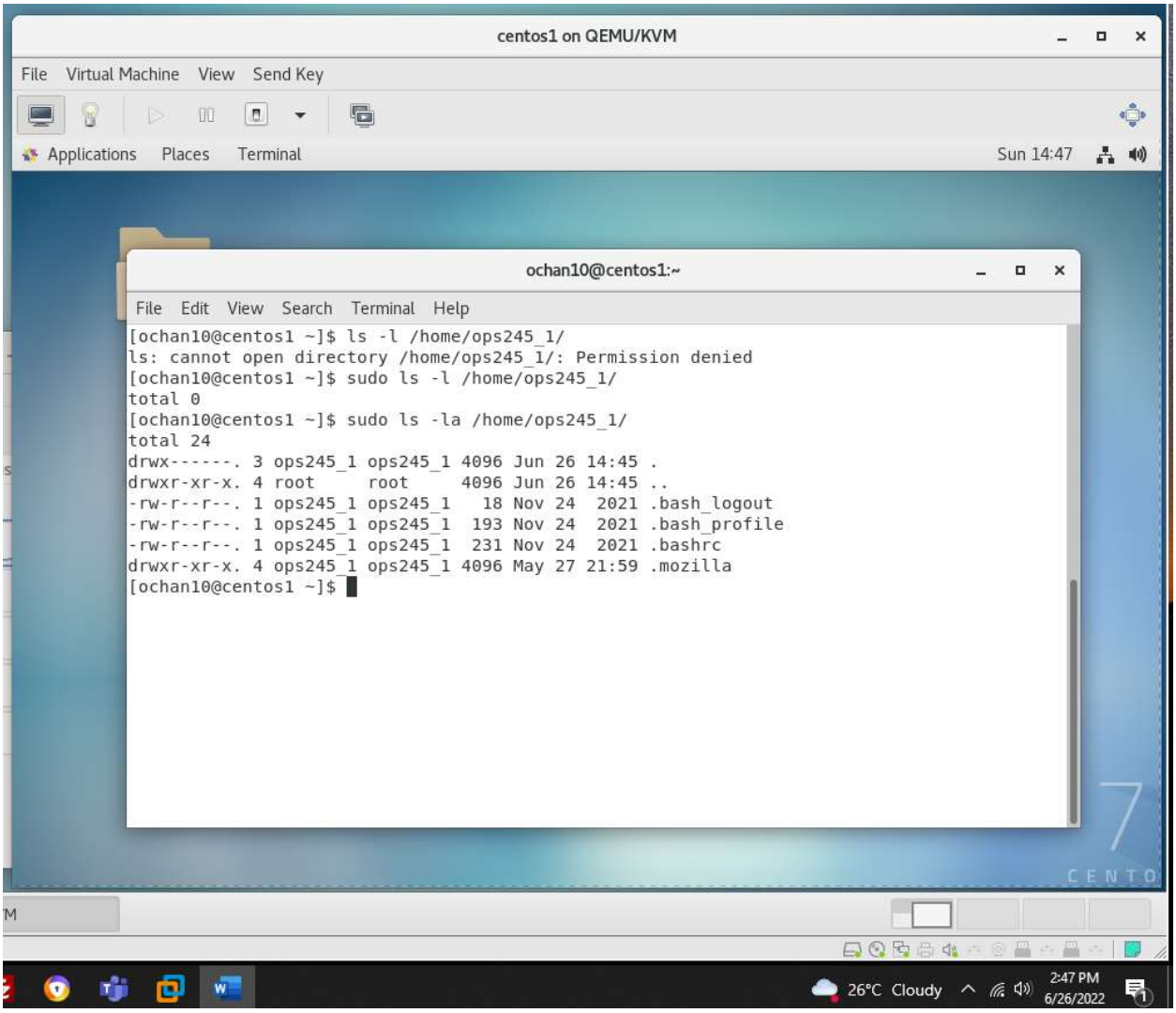
/home directory was created when adding the user.



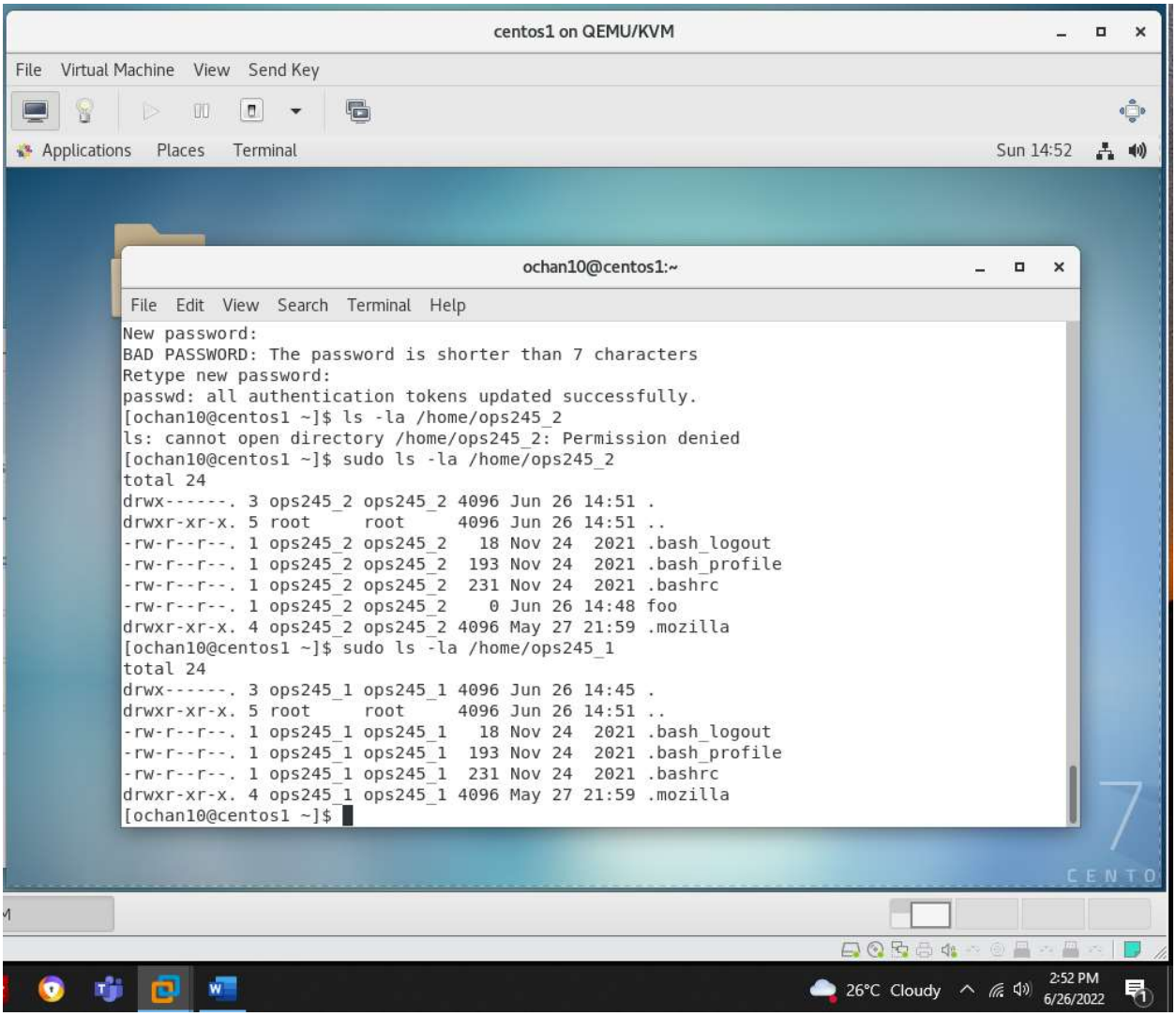
Grep /etc/passwd after user2 was added.



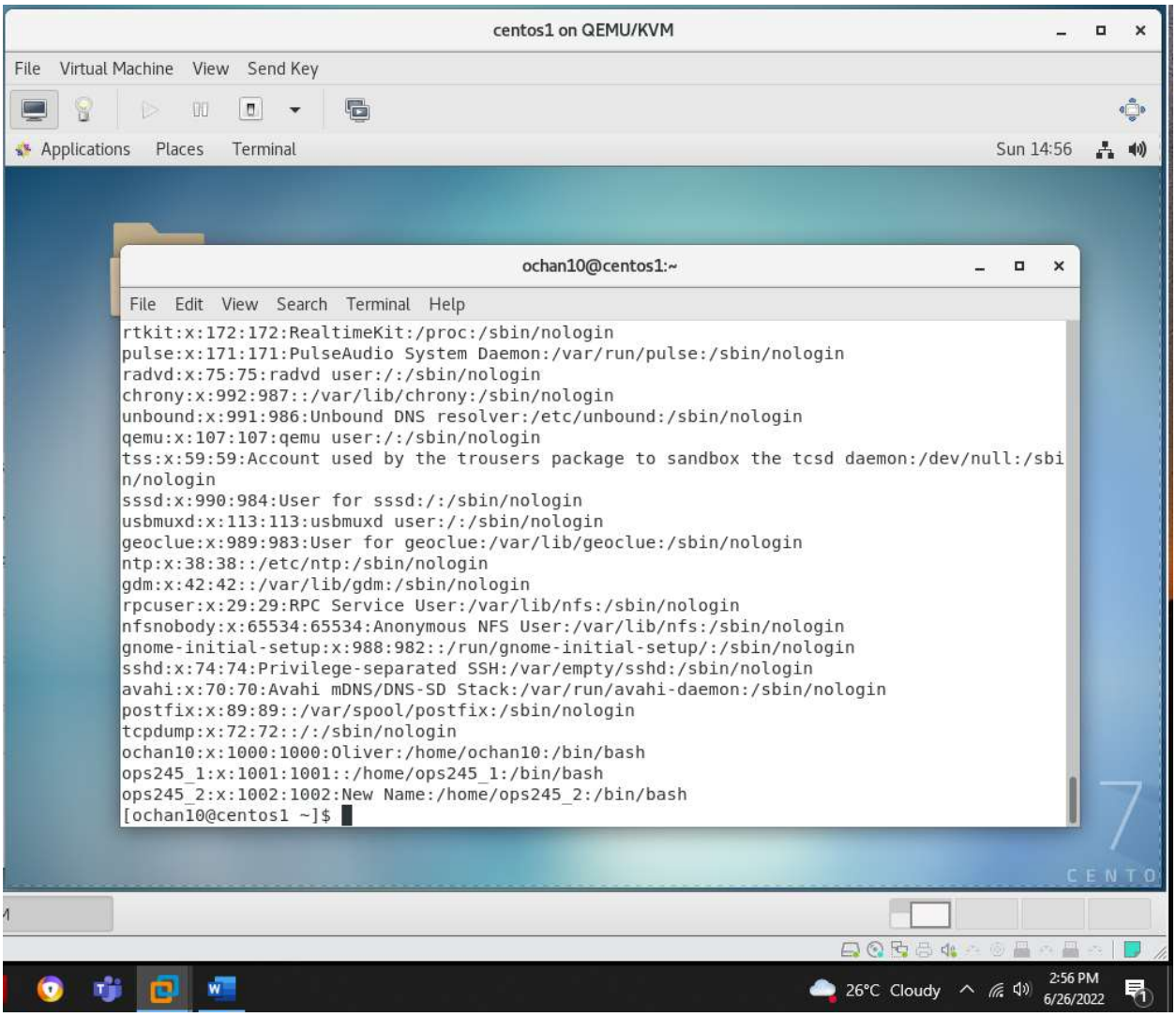
Ops245_1 folder content using ls -la



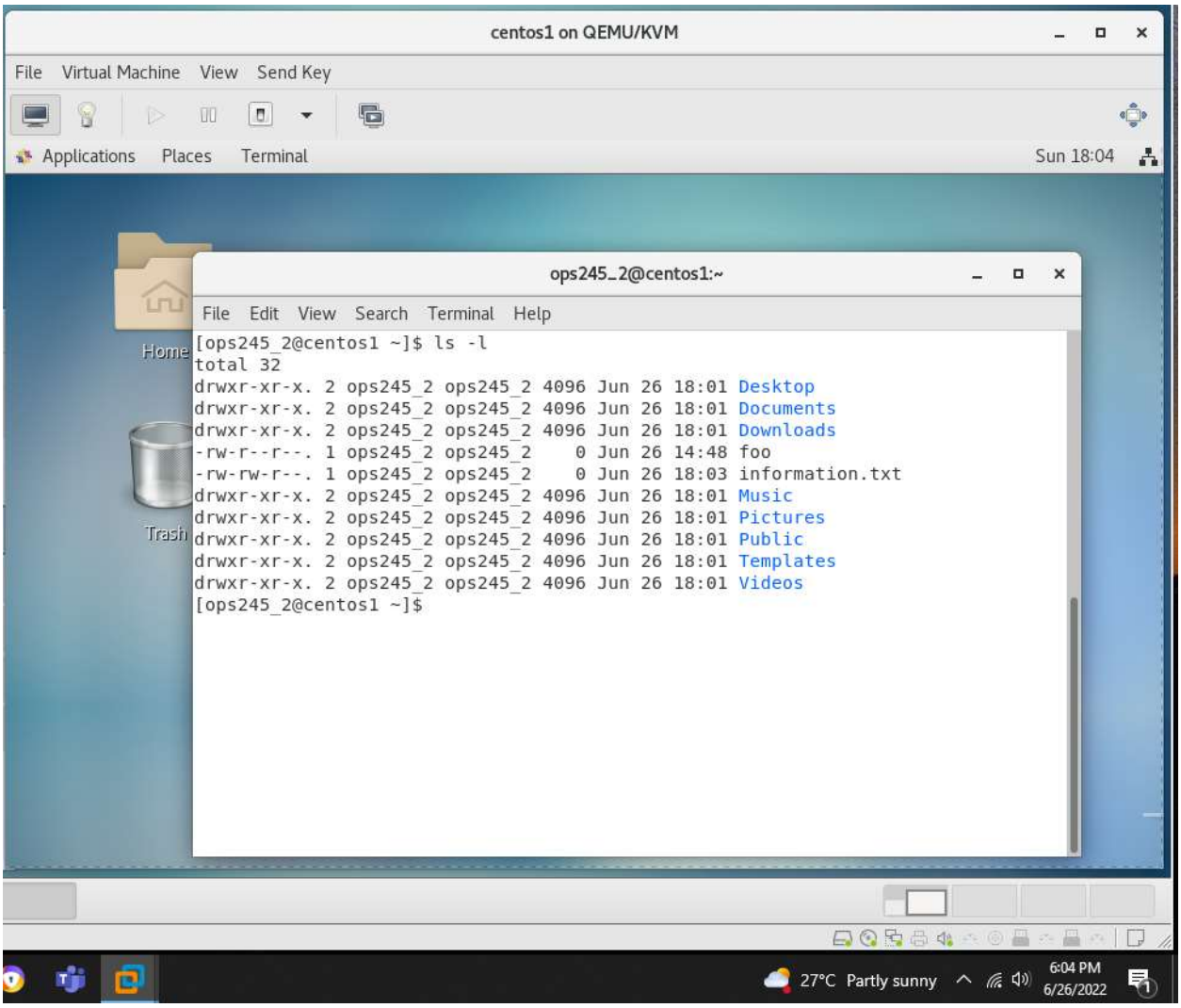
Check folder content for ops245_1 and ops245_2



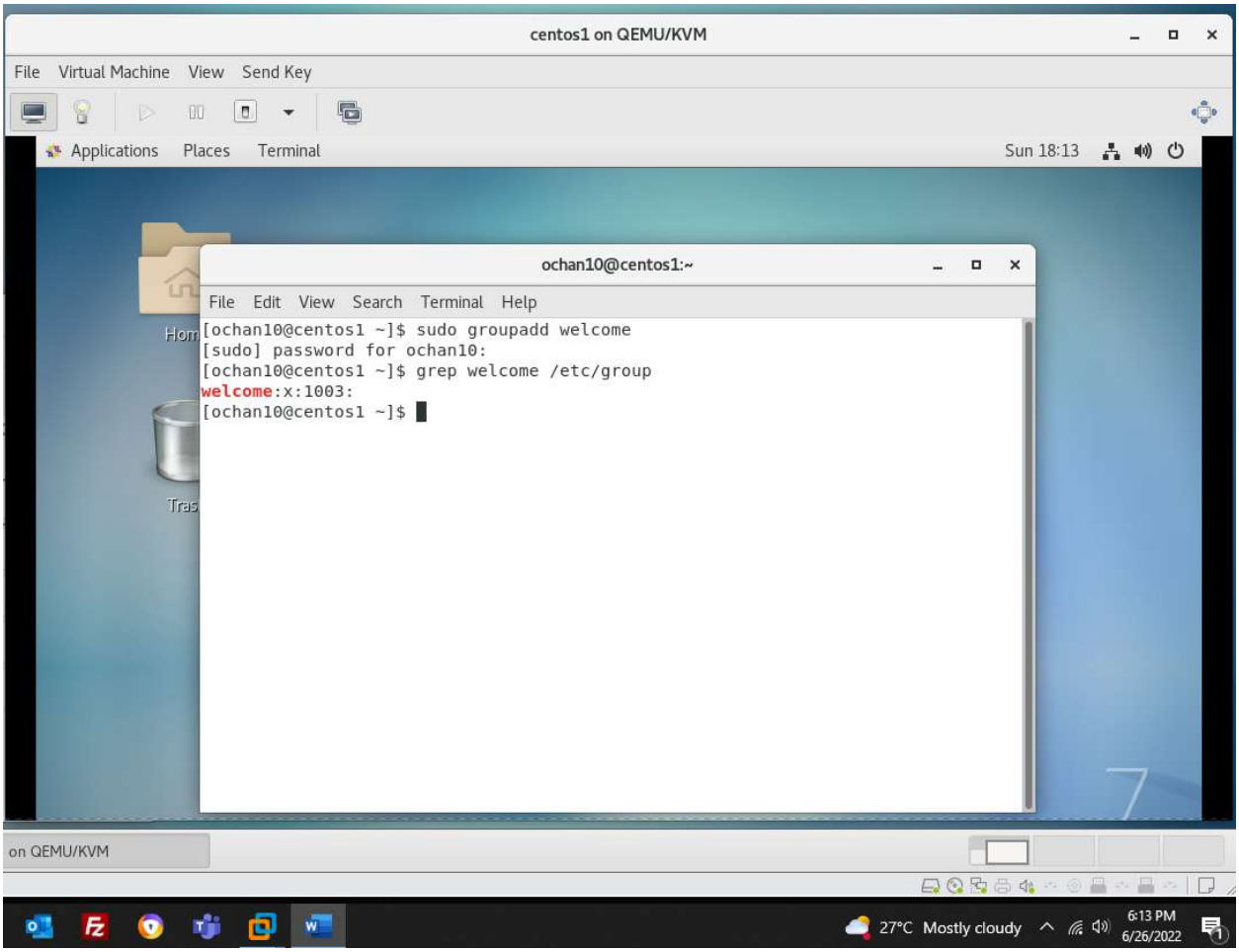
Usermod -c “New Name” ops245_2:



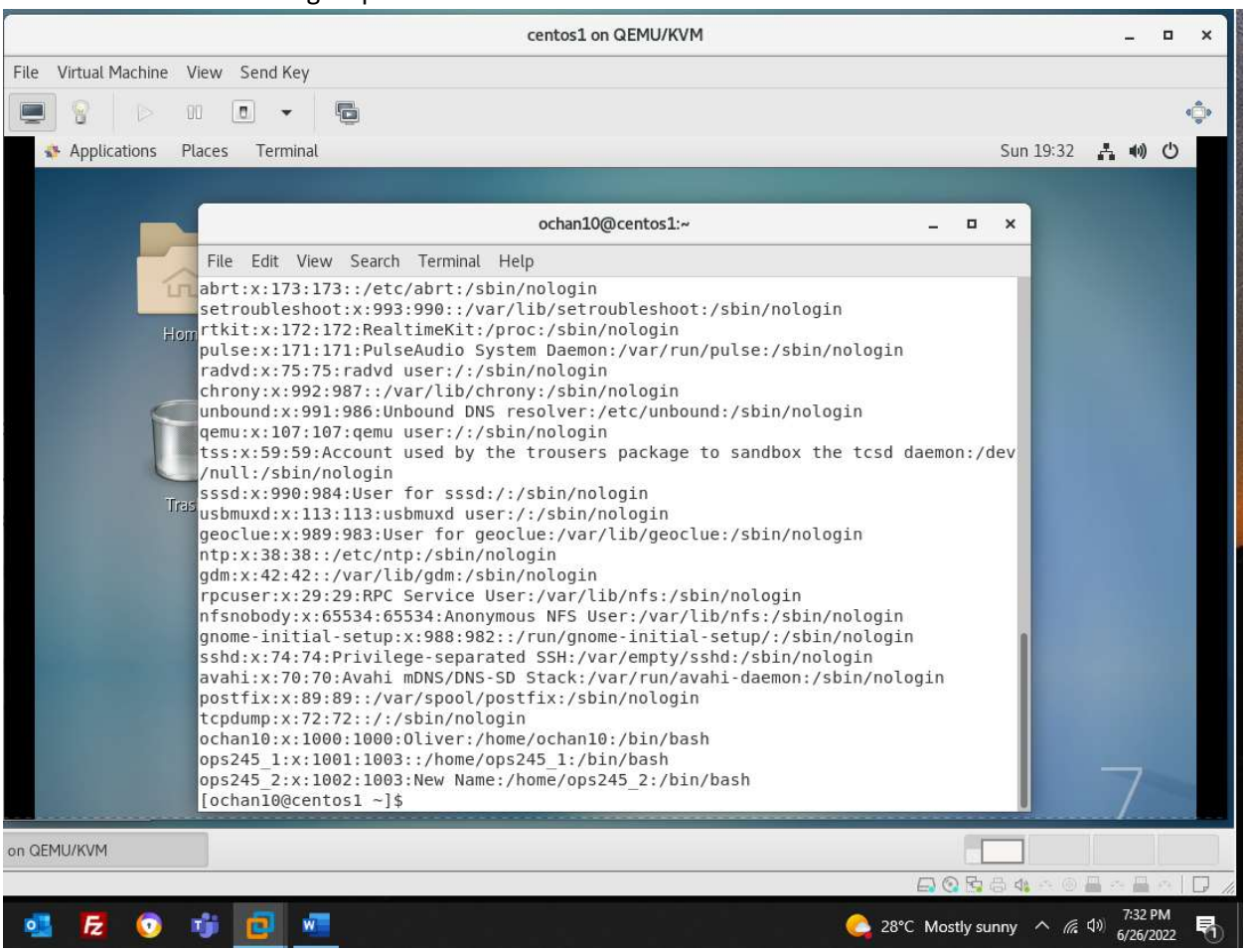
New Name:

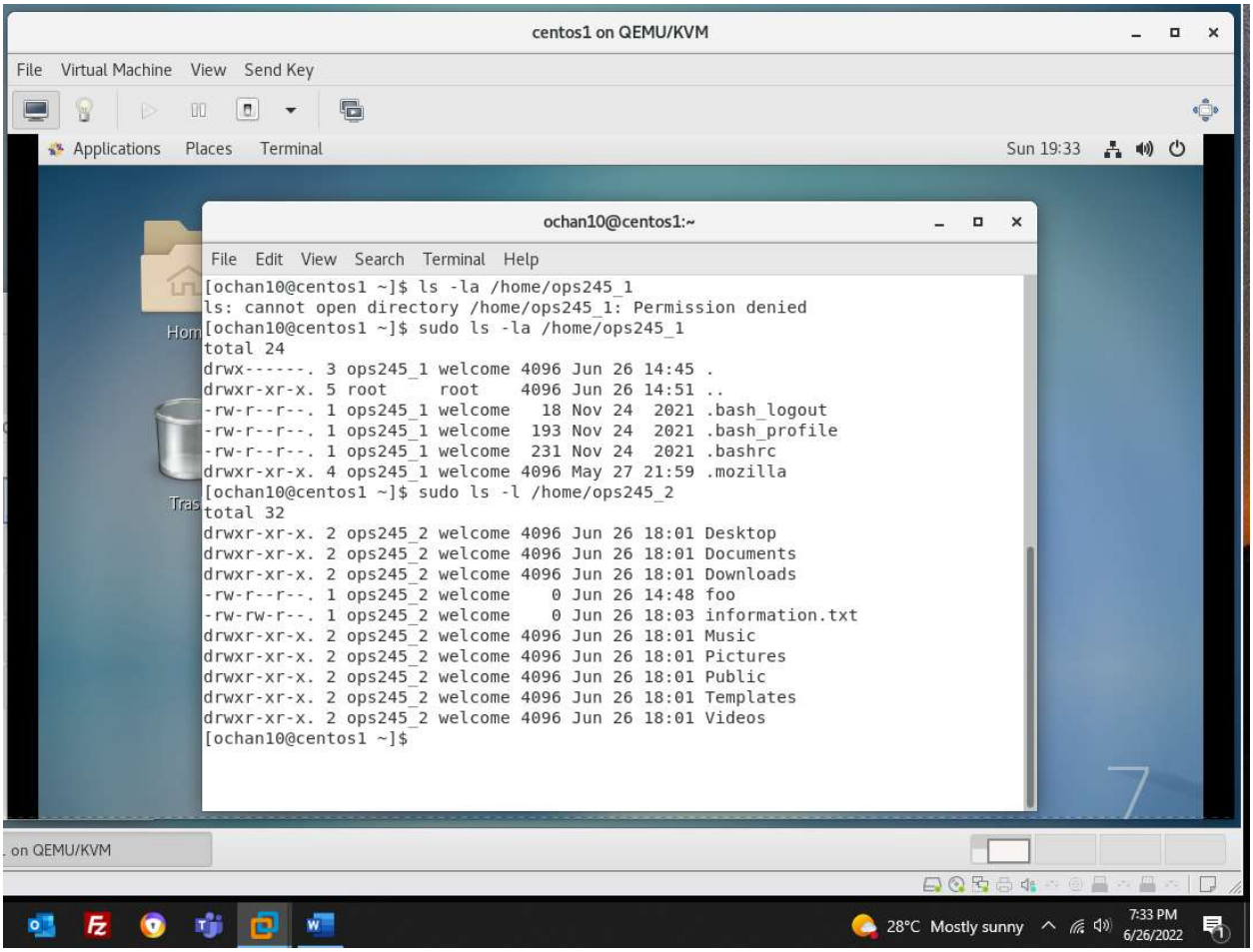

centos1 on QEMU/KVM
File Virtual Machine View Send Key
Applications Places Terminal
Sun 18:04
Home
Trash
ops245_2@centos1:~
File Edit View Search Terminal Help
[ops245_2@centos1 ~]$ ls -l
total 32
drwxr-xr-x. 2 ops245_2 ops245_2 4096 Jun 26 18:01 Desktop
drwxr-xr-x. 2 ops245_2 ops245_2 4096 Jun 26 18:01 Documents
drwxr-xr-x. 2 ops245_2 ops245_2 4096 Jun 26 18:01 Downloads
-rw-r--r--. 1 ops245_2 ops245_2 0 Jun 26 14:48 foo
-rw-rw-r--. 1 ops245_2 ops245_2 0 Jun 26 18:03 information.txt
drwxr-xr-x. 2 ops245_2 ops245_2 4096 Jun 26 18:01 Music
drwxr-xr-x. 2 ops245_2 ops245_2 4096 Jun 26 18:01 Pictures
drwxr-xr-x. 2 ops245_2 ops245_2 4096 Jun 26 18:01 Public
drwxr-xr-x. 2 ops245_2 ops245_2 4096 Jun 26 18:01 Templates
drwxr-xr-x. 2 ops245_2 ops245_2 4096 Jun 26 18:01 Videos
[ops245_2@centos1 ~]$
27°C Partly sunny
6:04 PM
6/26/2022

Add group welcome:



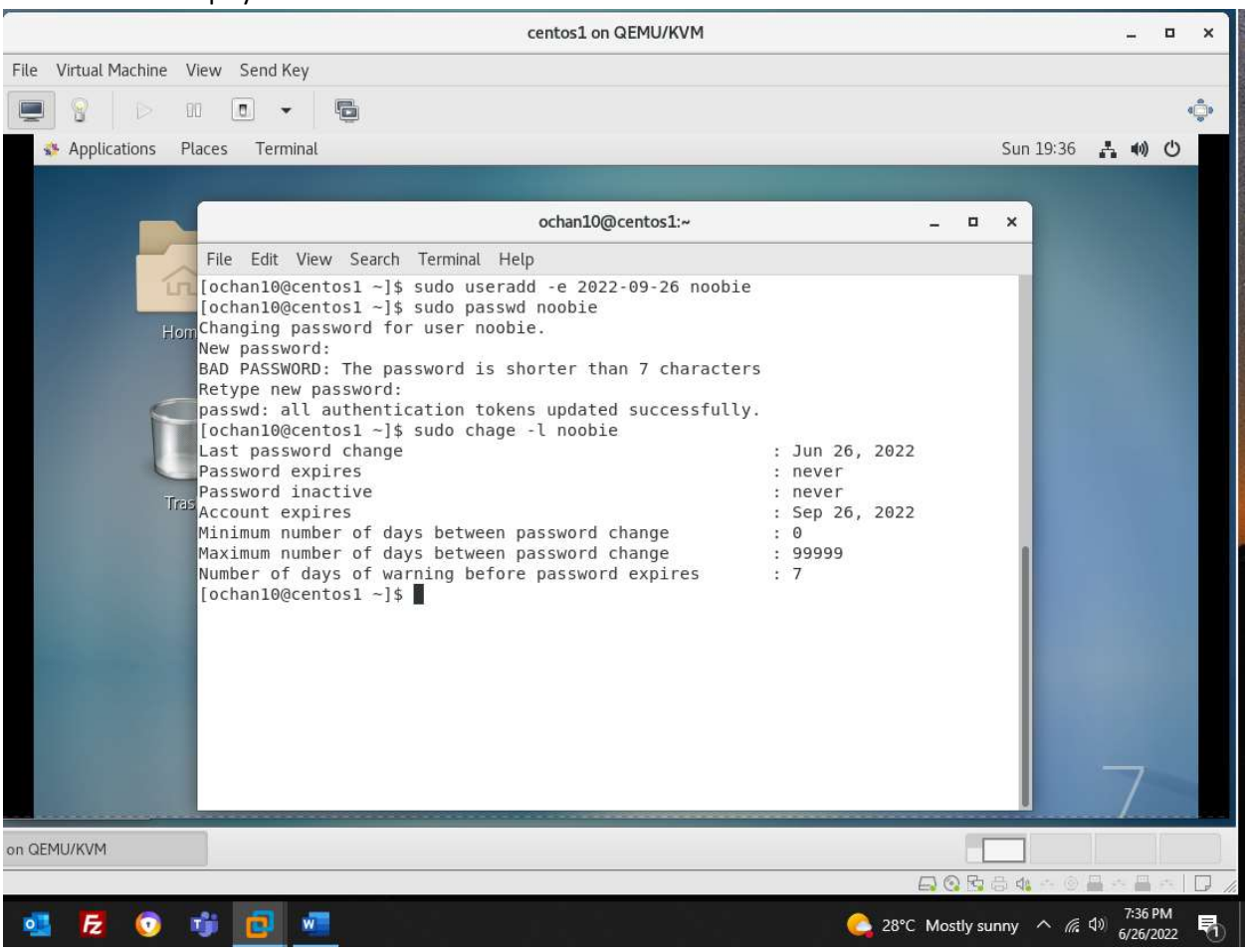
Add user to the welcome group:

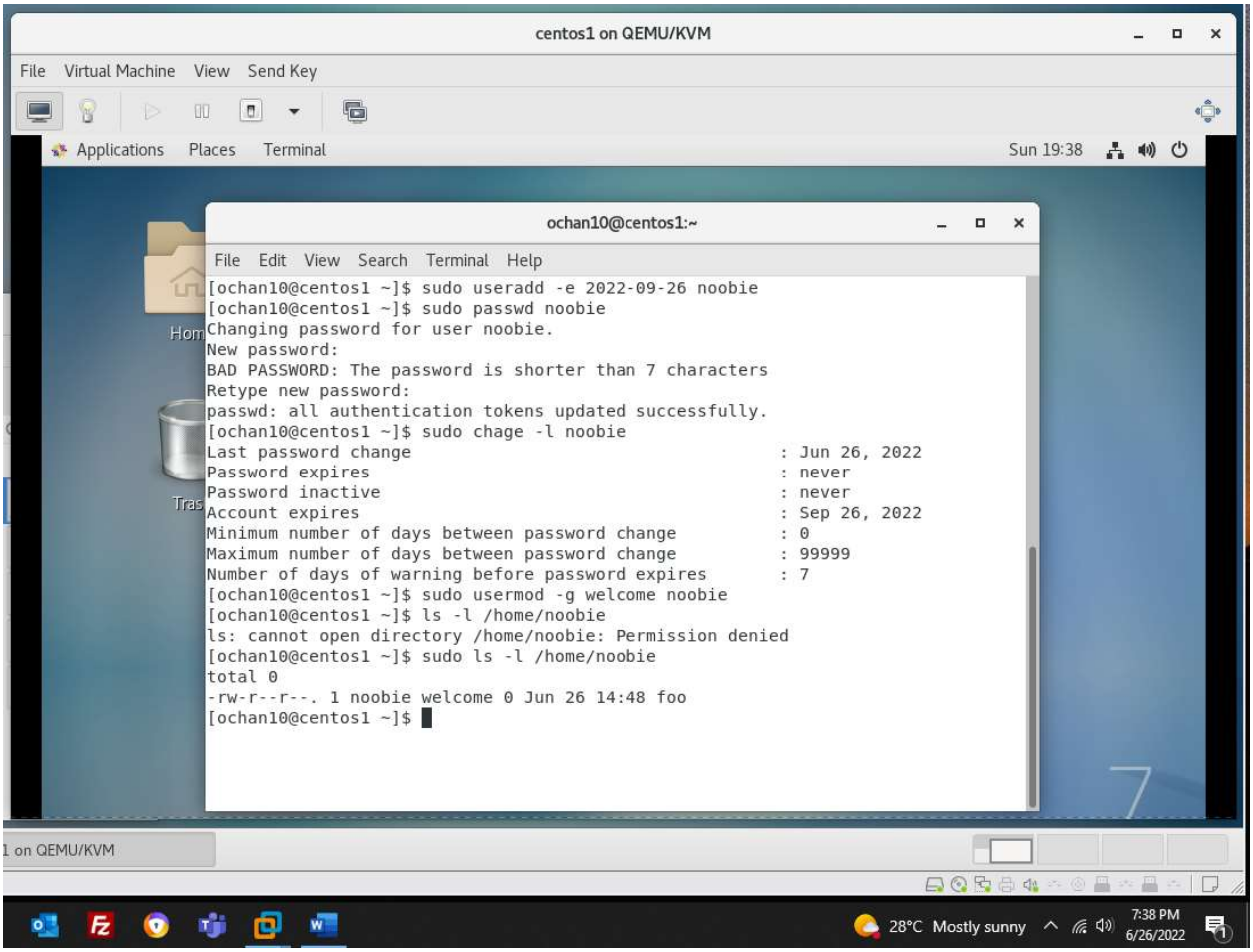



centos1 on QEMU/KVM
File Virtual Machine View Send Key
Applications Places Terminal
Sun 19:33
ochan10@centos1:~
File Edit View Search Terminal Help
[ochan10@centos1 ~]$ ls -la /home/ops245_1
ls: cannot open directory /home/ops245_1: Permission denied
[ochan10@centos1 ~]$ sudo ls -la /home/ops245_1
total 24
drwx------. 3 ops245_1 welcome 4096 Jun 26 14:45 .
drwxr-xr-x. 5 root root 4096 Jun 26 14:51 ..
-rw-r--r--. 1 ops245_1 welcome 18 Nov 24 2021 .bash_logout
-rw-r--r--. 1 ops245_1 welcome 193 Nov 24 2021 .bash_profile
-rw-r--r--. 1 ops245_1 welcome 231 Nov 24 2021 .bashrc
drwxr-xr-x. 4 ops245_1 welcome 4096 May 27 21:59 .mozilla
[ochan10@centos1 ~]$ sudo ls -l /home/ops245_2
total 32
drwxr-xr-x. 2 ops245_2 welcome 4096 Jun 26 18:01 Desktop
drwxr-xr-x. 2 ops245_2 welcome 4096 Jun 26 18:01 Documents
drwxr-xr-x. 2 ops245_2 welcome 4096 Jun 26 18:01 Downloads
-rw-r--r--. 1 ops245_2 welcome 0 Jun 26 14:48 foo
-rw-rw-r--. 1 ops245_2 welcome 0 Jun 26 18:03 information.txt
drwxr-xr-x. 2 ops245_2 welcome 4096 Jun 26 18:01 Music
drwxr-xr-x. 2 ops245_2 welcome 4096 Jun 26 18:01 Pictures
drwxr-xr-x. 2 ops245_2 welcome 4096 Jun 26 18:01 Public
drwxr-xr-x. 2 ops245_2 welcome 4096 Jun 26 18:01 Templates
drwxr-xr-x. 2 ops245_2 welcome 4096 Jun 26 18:01 Videos
[ochan10@centos1 ~]$
28°C Mostly sunny
7:33 PM
6/26/2022

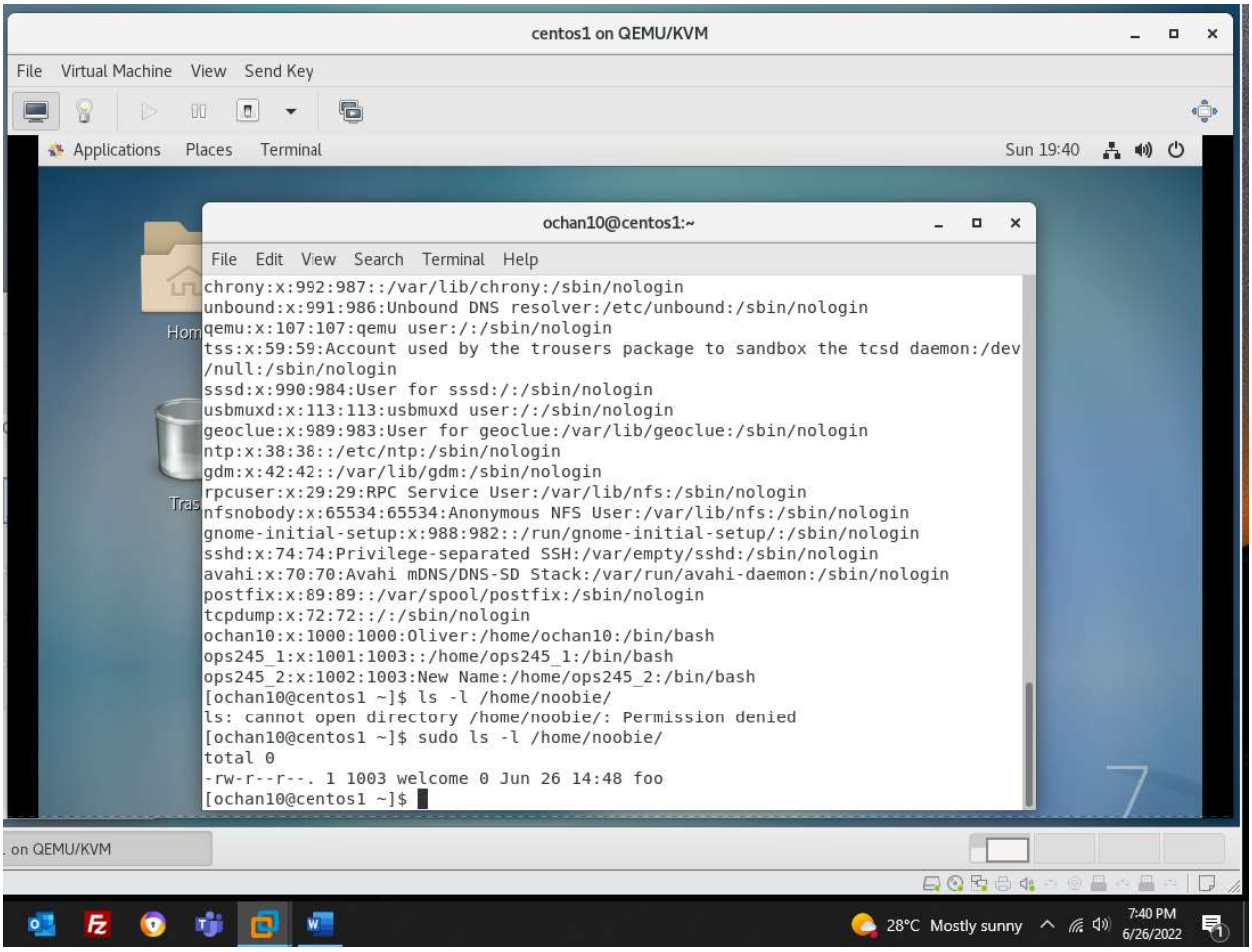
Practical Exam:

New user with expiry date



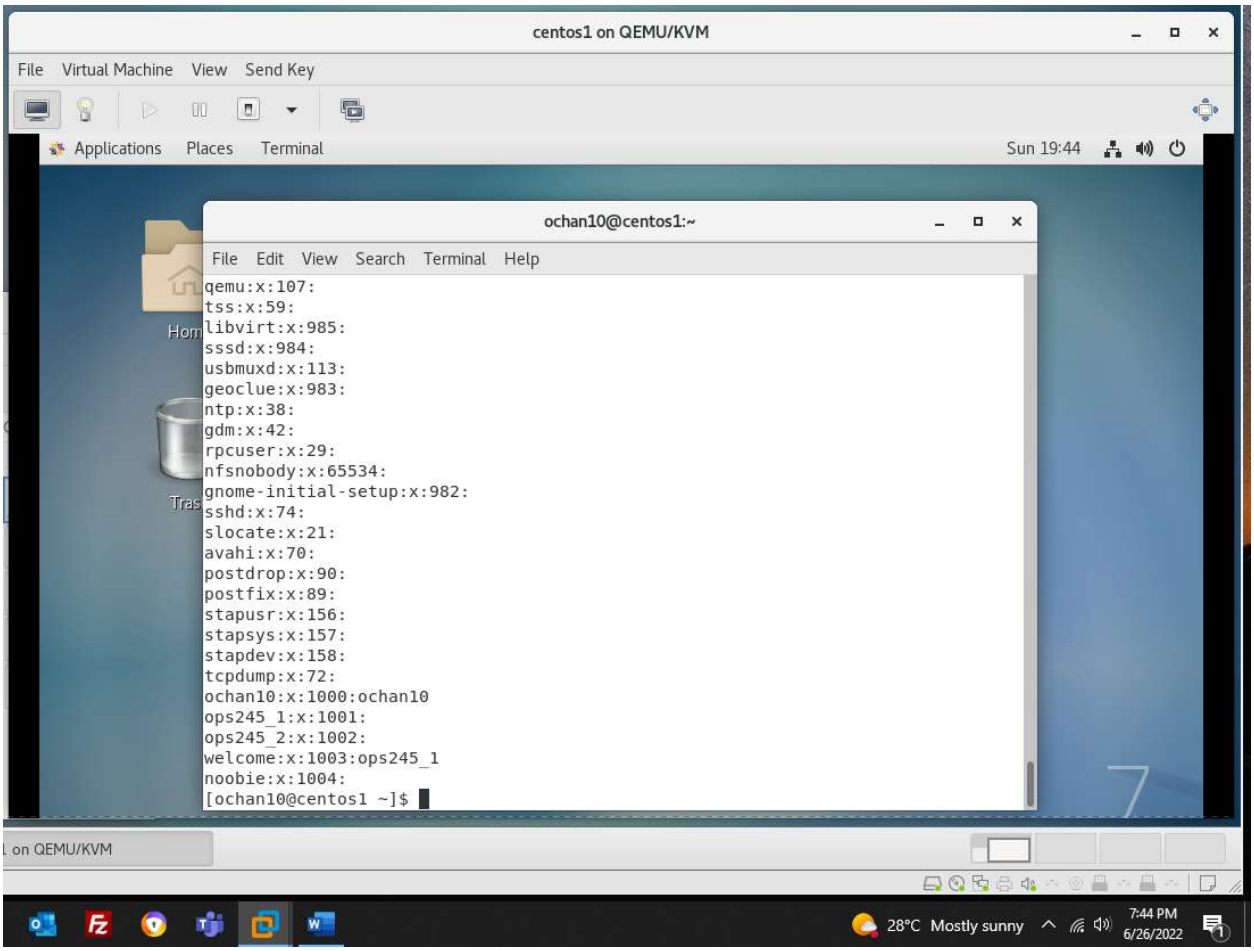

centos1 on QEMU/KVM
File Virtual Machine View Send Key
Applications Places Terminal
Sun 19:38
ochan10@centos1:~
File Edit View Search Terminal Help
[ochan10@centos1 ~]$ sudo useradd -e 2022-09-26 noobie
[ochan10@centos1 ~]$ sudo passwd noobie
Changing password for user noobie.
New password:
BAD PASSWORD: The password is shorter than 7 characters
Retype new password:
passwd: all authentication tokens updated successfully.
[ochan10@centos1 ~]$ sudo chage -l noobie
Last password change : Jun 26, 2022
Password expires : never
Password inactive : never
Account expires : Sep 26, 2022
Minimum number of days between password change : 0
Maximum number of days between password change : 99999
Number of days of warning before password expires : 7
[ochan10@centos1 ~]$ sudo usermod -g welcome noobie
[ochan10@centos1 ~]$ ls -l /home/noobie
ls: cannot open directory /home/noobie: Permission denied
[ochan10@centos1 ~]$ sudo ls -l /home/noobie
total 0
-rw-r--r--. 1 noobie welcome 0 Jun 26 14:48 foo
[ochan10@centos1 ~]$
28°C Mostly sunny
7:38 PM
6/26/2022

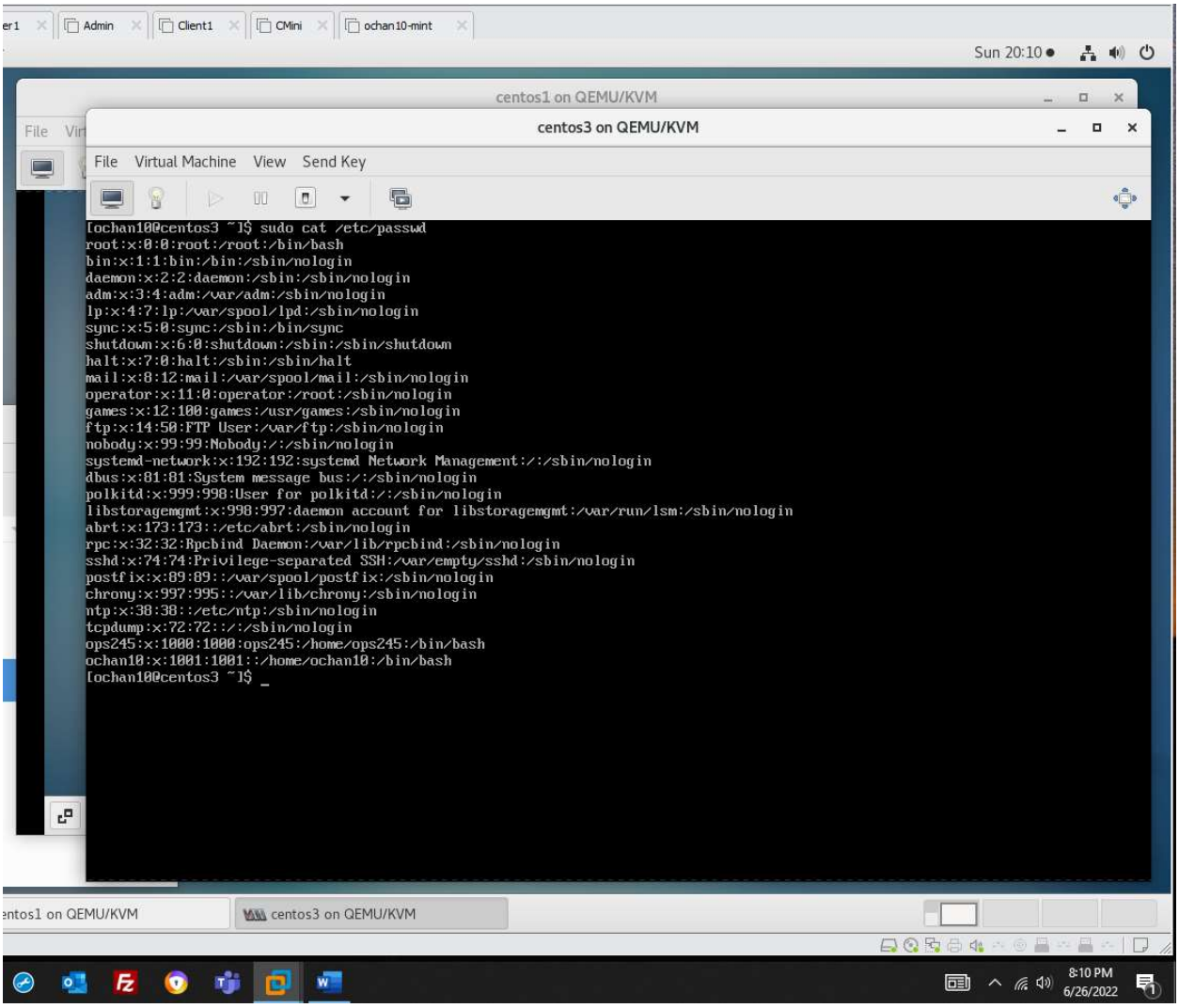
Delete user noobie and kept directory:

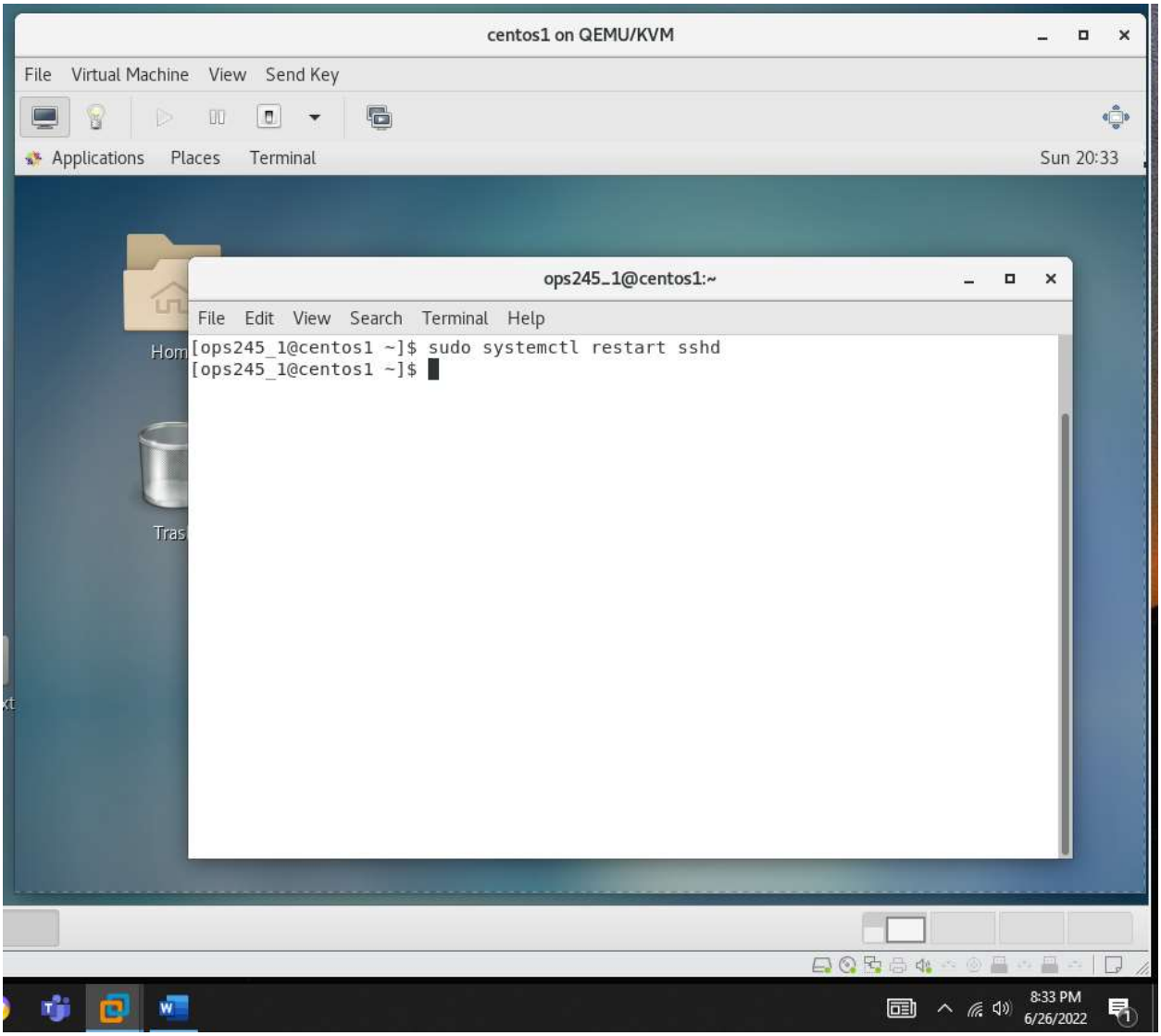


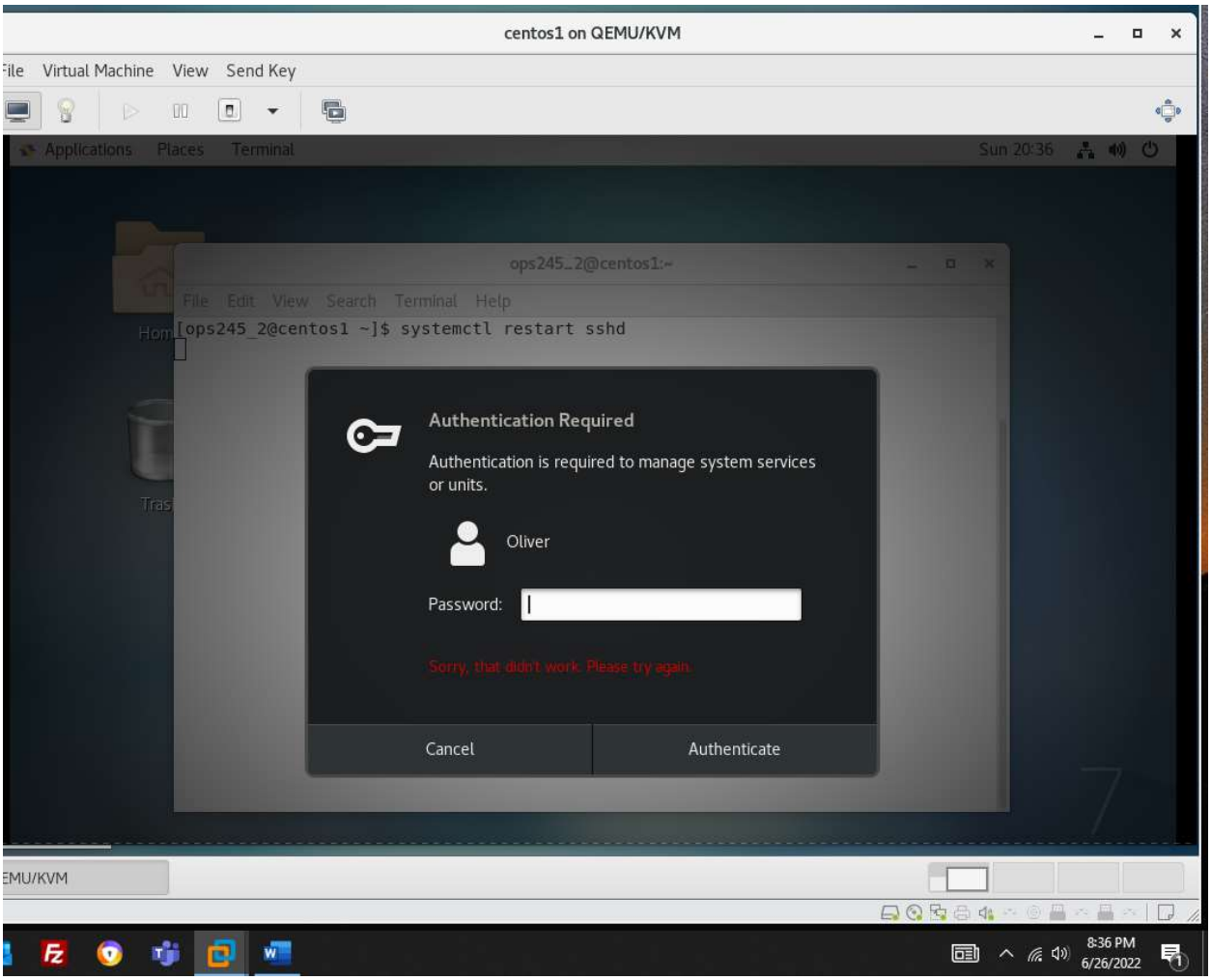
Investigation 2:

/etc/group

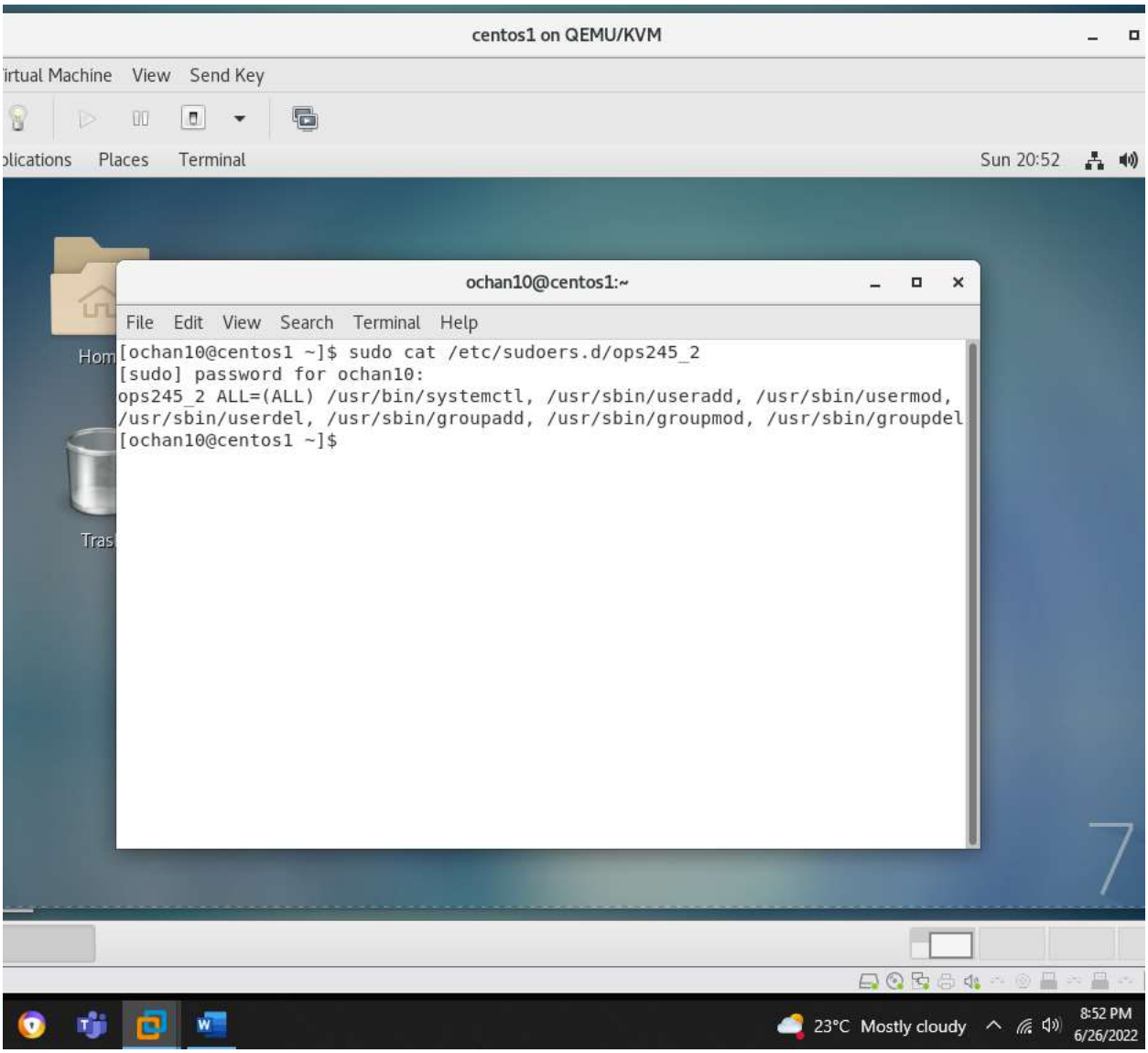


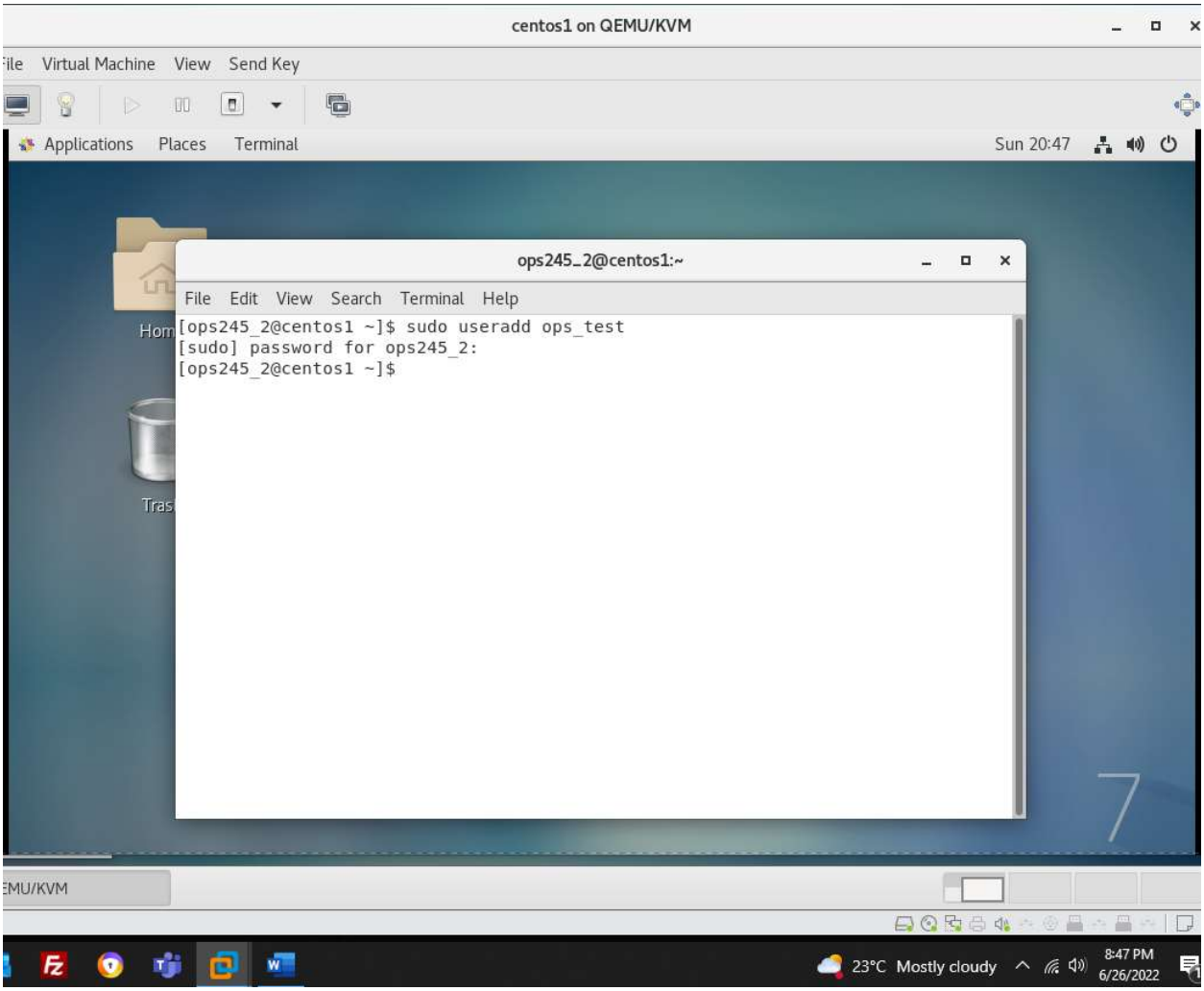

Admin
Client1
CMini
ochan10-mint
Sun 20:10
centos1 on QEMU/KVM
centos3 on QEMU/KVM
File
Virtual Machine
View
Send Key
[ochan10@centos3 ~]$ sudo cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
daemon:x:2:2:daemon:/sbin:/sbin/nologin
adm:x:3:4:adm:/var/adm:/sbin/nologin
lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin
sync:x:5:0:sync:/sbin:/bin/sync
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
halt:x:7:0:halt:/sbin:/sbin/halt
mail:x:8:12:mail:/var/spool/mail:/sbin/nologin
operator:x:11:0:operator:/root:/sbin/nologin
games:x:12:100:games:/usr/games:/sbin/nologin
ftp:x:14:50:FTP User:/var/ftp:/sbin/nologin
nobody:x:99:99:Nobody:/:/sbin/nologin
systemd-network:x:192:192:systemd Network Management:/:/sbin/nologin
dbus:x:81:81:System message bus:/:/sbin/nologin
polkitd:x:999:998:User for polkitd:/:/sbin/nologin
libstoragemgmt:x:998:997:daemon account for libstoragemgmt:/var/run/lsm:/sbin/nologin
abrt:x:173:173::/etc/abrt:/sbin/nologin
rpc:x:32:32:Rpcbind Daemon:/var/lib/rpcbind:/sbin/nologin
sshd:x:74:74:Privilege-separated SSH:/var/empty/sshd:/sbin/nologin
postfix:x:89:89::/var/spool/postfix:/sbin/nologin
chrony:x:997:995::/var/lib/chrony:/sbin/nologin
ntp:x:38:38::/etc/ntp:/sbin/nologin
tcpdump:x:72:72::/:/sbin/nologin
ops245:x:1000:1000:ops245:/home/ops245:/bin/bash
ochan10:x:1001:1001::/home/ochan10:/bin/bash
[ochan10@centos3 ~]$
centos1 on QEMU/KVM
centos3 on QEMU/KVM
8:10 PM
6/26/2022


centos1 on QEMU/KVM
File Virtual Machine View Send Key
Applications Places Terminal
Sun 20:33
ops245_1@centos1:~
File Edit View Search Terminal Help
[ops245_1@centos1 ~]$ sudo systemctl restart sshd
[ops245_1@centos1 ~]$
8:33 PM
6/26/2022


centos1 on QEMU/KVM
File Virtual Machine View Send Key
Applications Places Terminal
Sun 20:36
ops245_2@centos1:~
File Edit View Search Terminal Help
[ops245_2@centos1 ~]$ systemctl restart sshd
Authentication Required
Authentication is required to manage system services or units.
Oliver
Password:
Sorry, that didn't work. Please try again.
Cancel
Authenticate
8:36 PM
6/26/2022

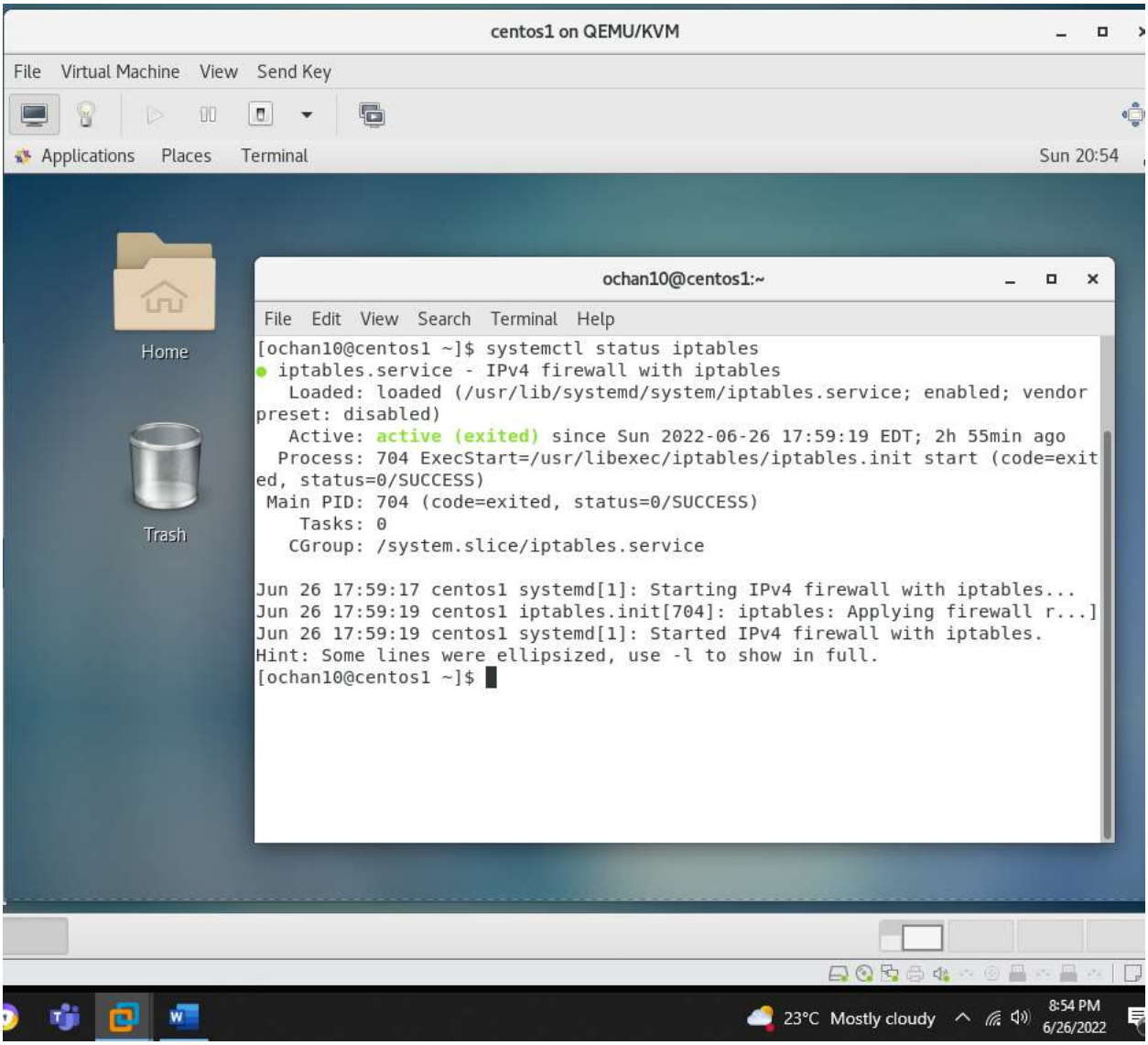
Create a sudeors file for ops245_2 and set it so that they can run the useradd, usermod, userdel, groupadd, groupmod, and groupdel commands through sudo



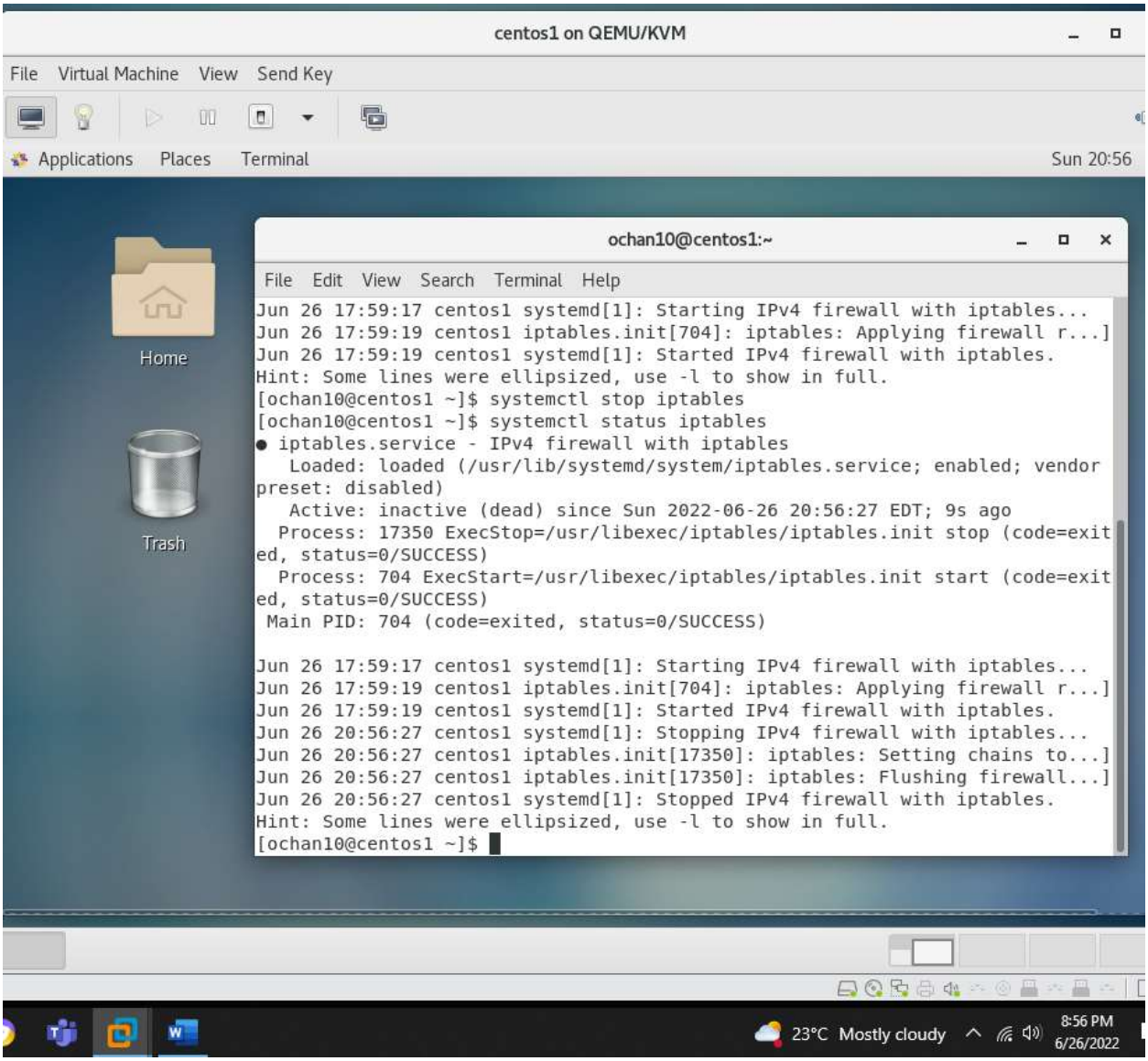

centos1 on QEMU/KVM
File Virtual Machine View Send Key
Applications Places Terminal
Sun 20:47
ops245_2@centos1:~
File Edit View Search Terminal Help
[ops245_2@centos1 ~]$ sudo useradd ops_test
[sudo] password for ops245_2:
[ops245_2@centos1 ~]$
23°C Mostly cloudy
8:47 PM
6/26/2022

Investigation3:

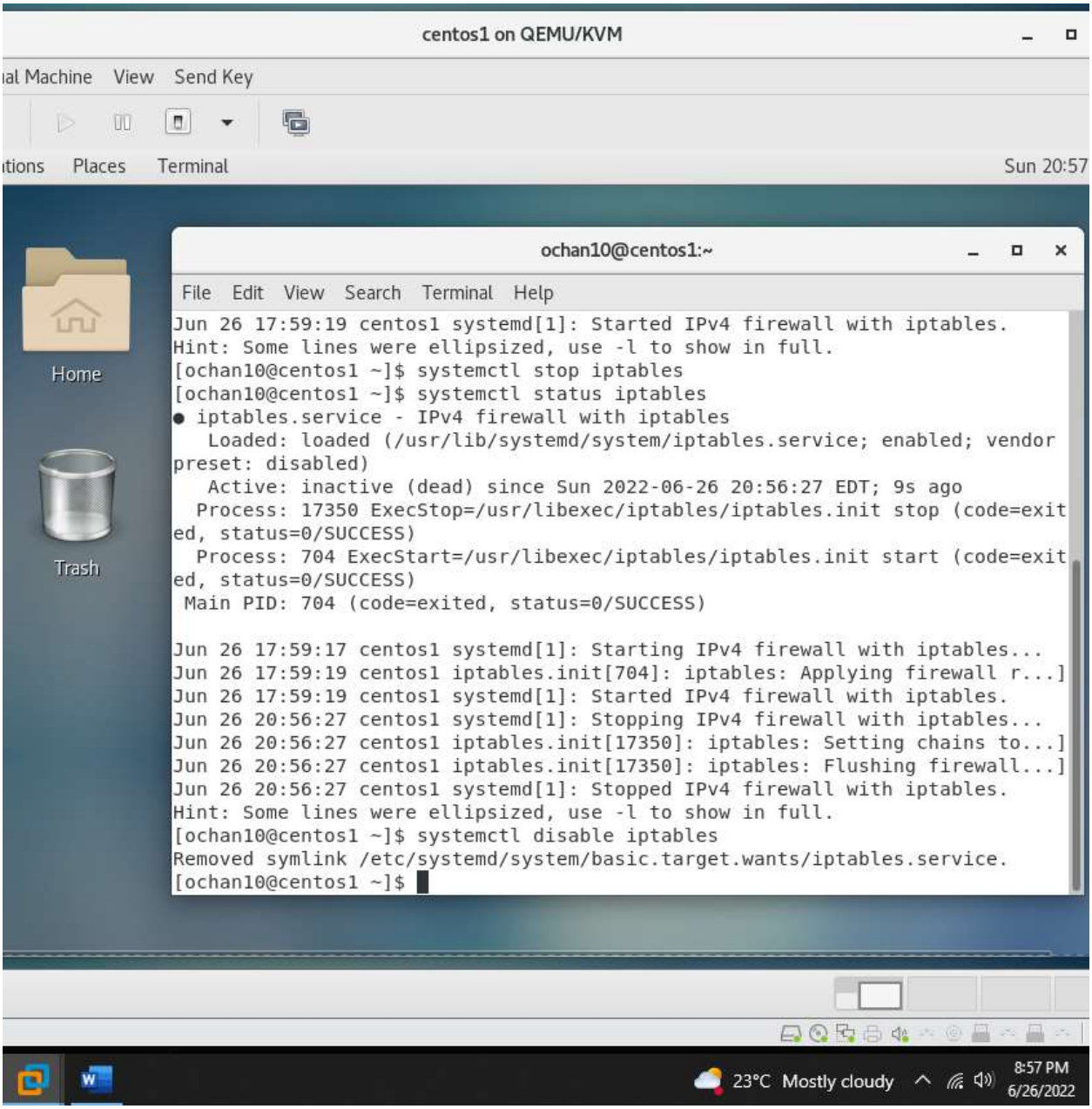
System status iptables

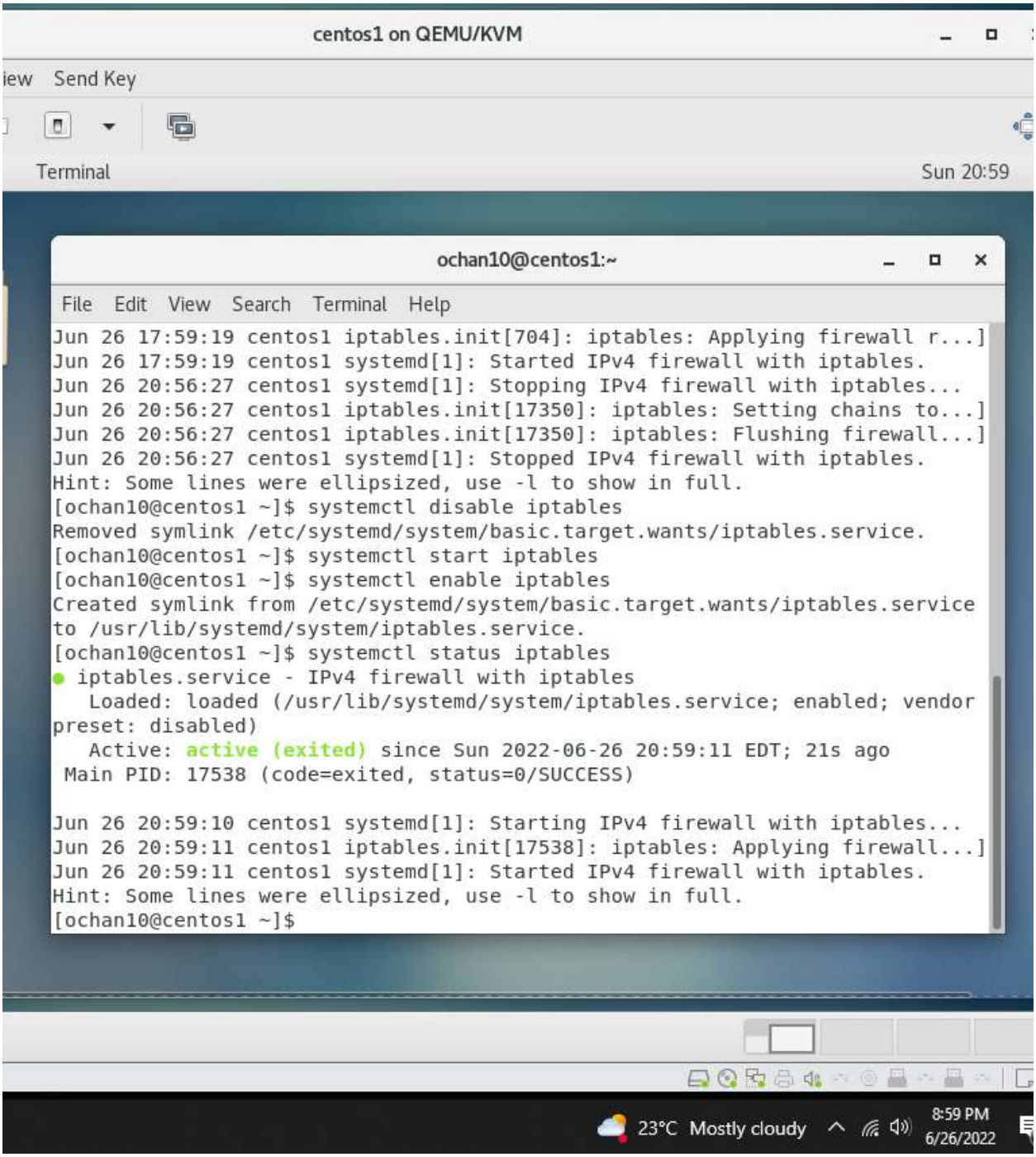


Stop iptables

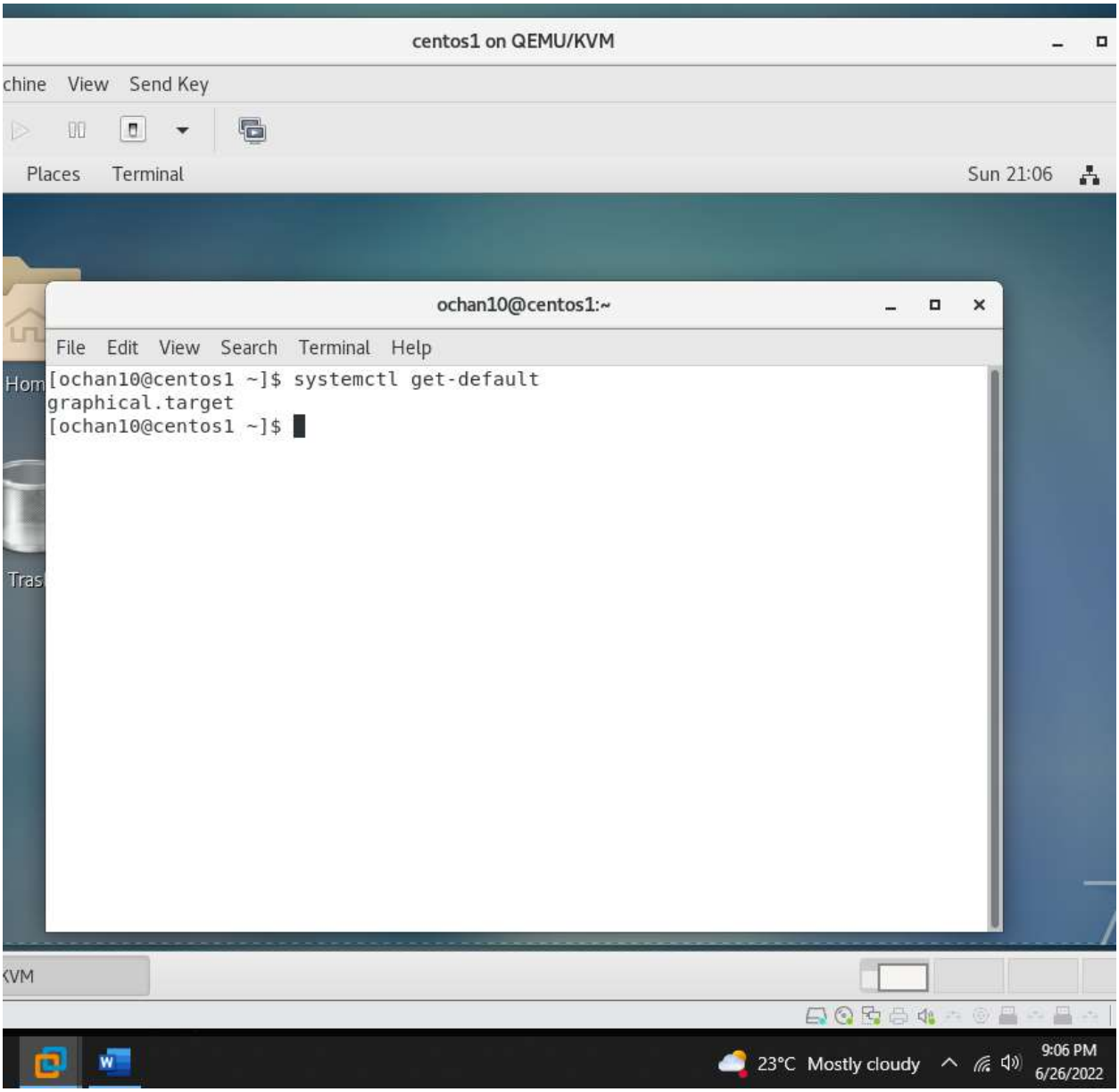


Disable iptables

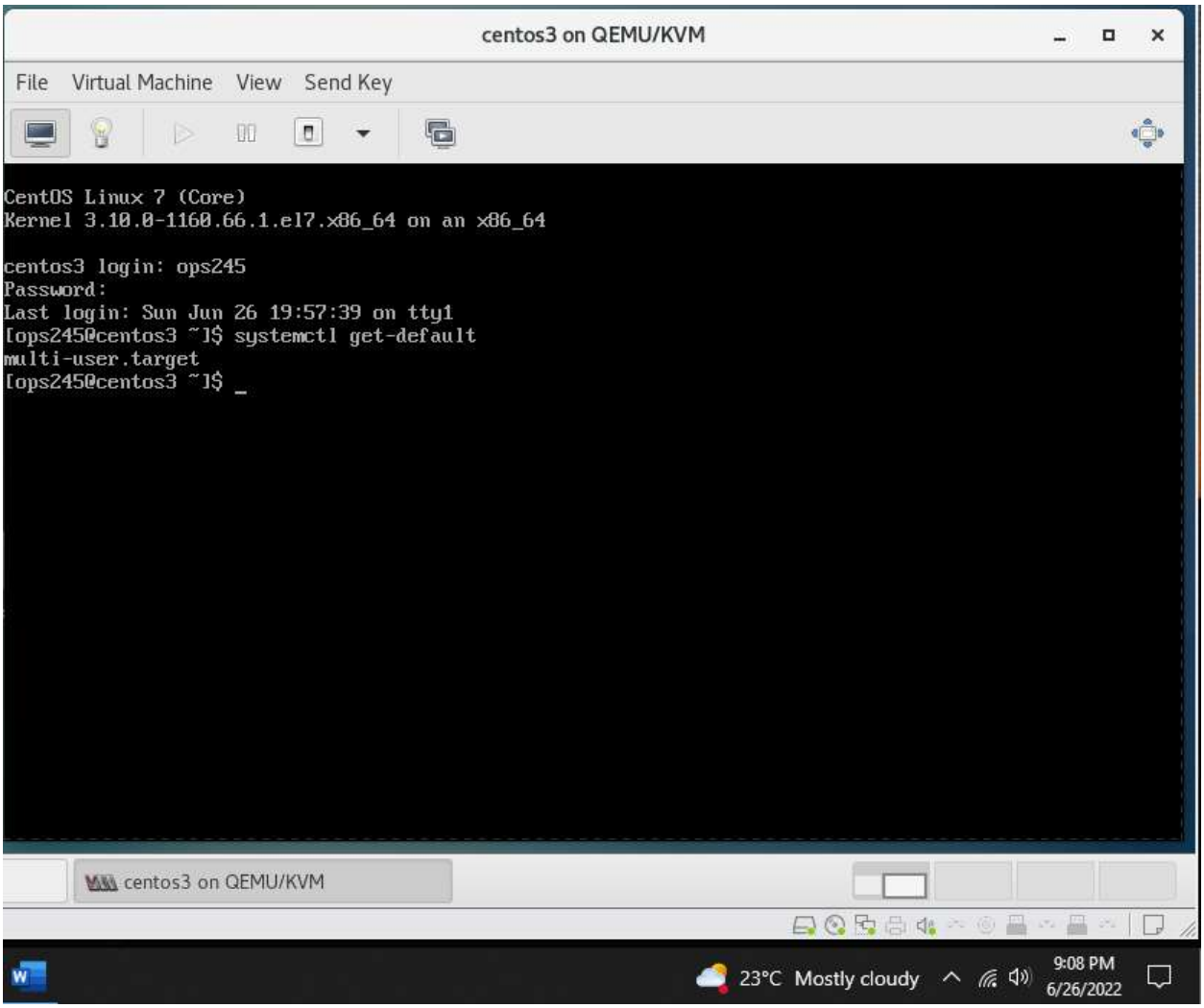



centos1 on QEMU/KVM
iew Send Key
Terminal
Sun 20:59
ochan10@centos1:~
File Edit View Search Terminal Help
Jun 26 17:59:19 centos1 iptables.init[704]: iptables: Applying firewall r...]
Jun 26 17:59:19 centos1 systemd[1]: Started IPv4 firewall with iptables.
Jun 26 20:56:27 centos1 systemd[1]: Stopping IPv4 firewall with iptables...
Jun 26 20:56:27 centos1 iptables.init[17350]: iptables: Setting chains to...]
Jun 26 20:56:27 centos1 iptables.init[17350]: iptables: Flushing firewall...]
Jun 26 20:56:27 centos1 systemd[1]: Stopped IPv4 firewall with iptables.
Hint: Some lines were ellipsized, use -l to show in full.
[ochan10@centos1 ~]$ systemctl disable iptables
Removed symlink /etc/systemd/system/basic.target.wants/iptables.service.
[ochan10@centos1 ~]$ systemctl start iptables
[ochan10@centos1 ~]$ systemctl enable iptables
Created symlink from /etc/systemd/system/basic.target.wants/iptables.service
to /usr/lib/systemd/system/iptables.service.
[ochan10@centos1 ~]$ systemctl status iptables
● iptables.service - IPv4 firewall with iptables
Loaded: loaded (/usr/lib/systemd/system/iptables.service; enabled; vendor
preset: disabled)
Active: active (exited) since Sun 2022-06-26 20:59:11 EDT; 21s ago
Main PID: 17538 (code=exited, status=0/SUCCESS)
Jun 26 20:59:10 centos1 systemd[1]: Starting IPv4 firewall with iptables...
Jun 26 20:59:11 centos1 iptables.init[17538]: iptables: Applying firewall...]
Jun 26 20:59:11 centos1 systemd[1]: Started IPv4 firewall with iptables.
Hint: Some lines were ellipsized, use -l to show in full.
[ochan10@centos1 ~]$
23°C Mostly cloudy
8:59 PM
6/26/2022

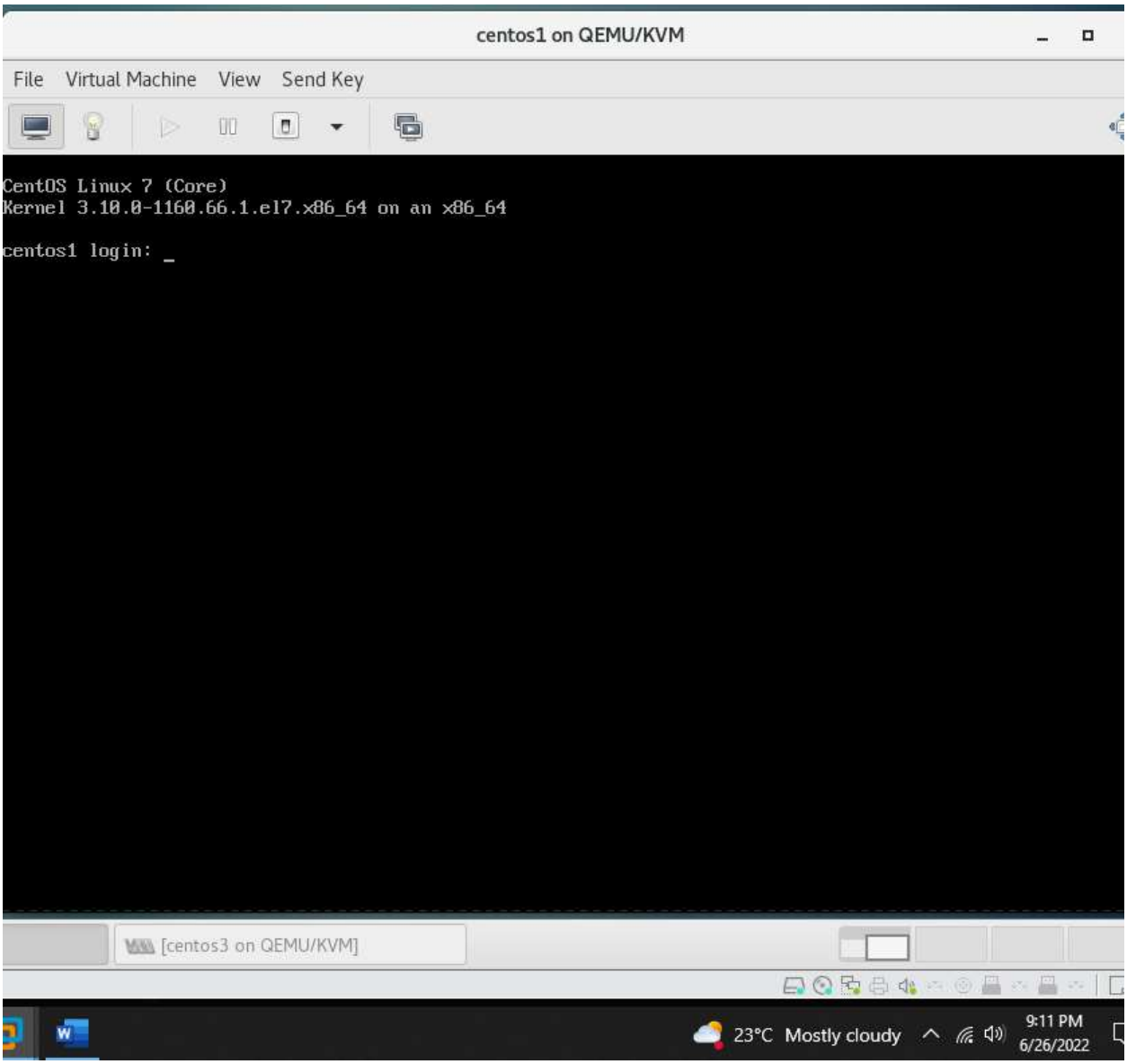
Centos1: systemctl get-default



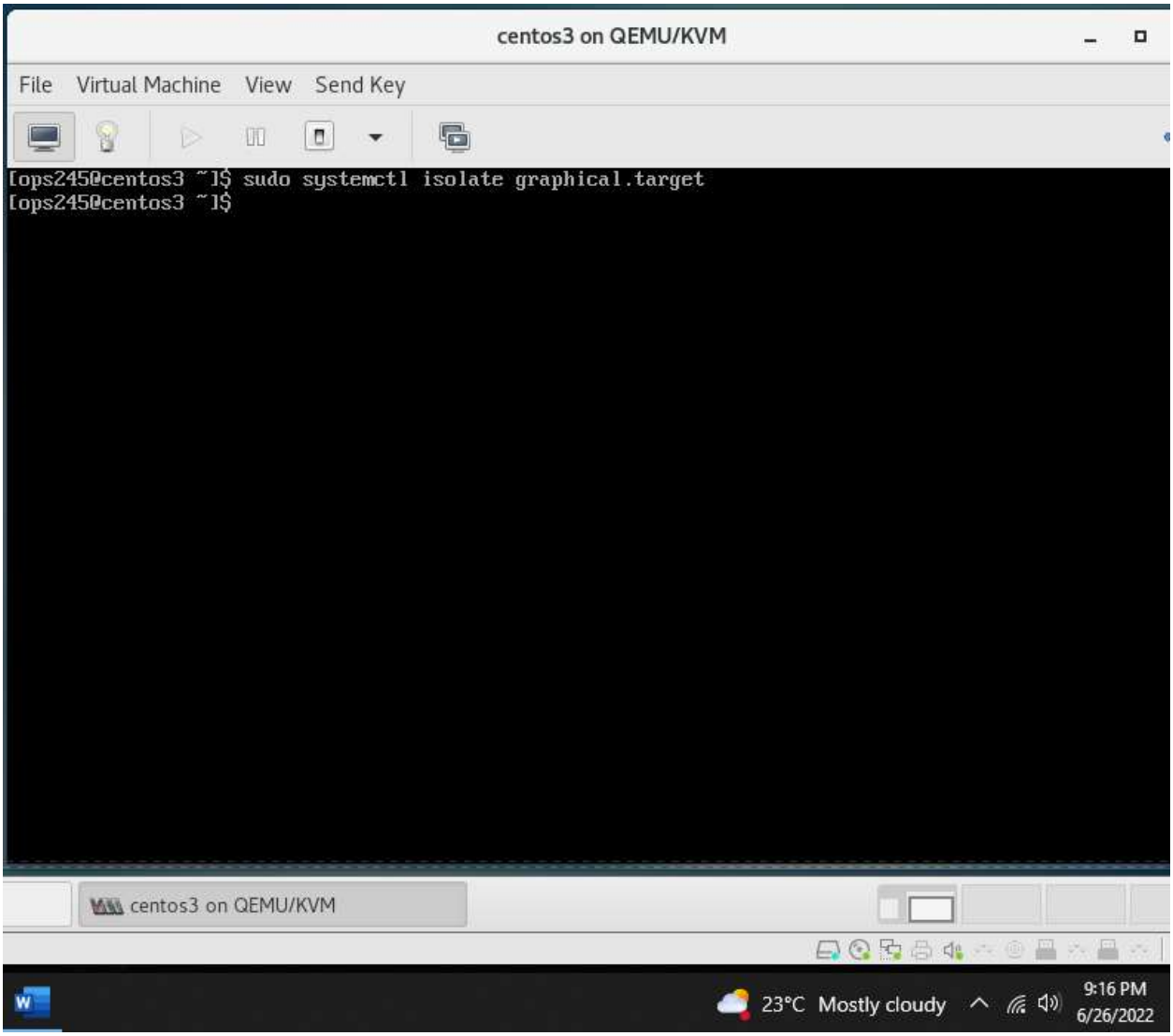
Centos3: systemctl get-default



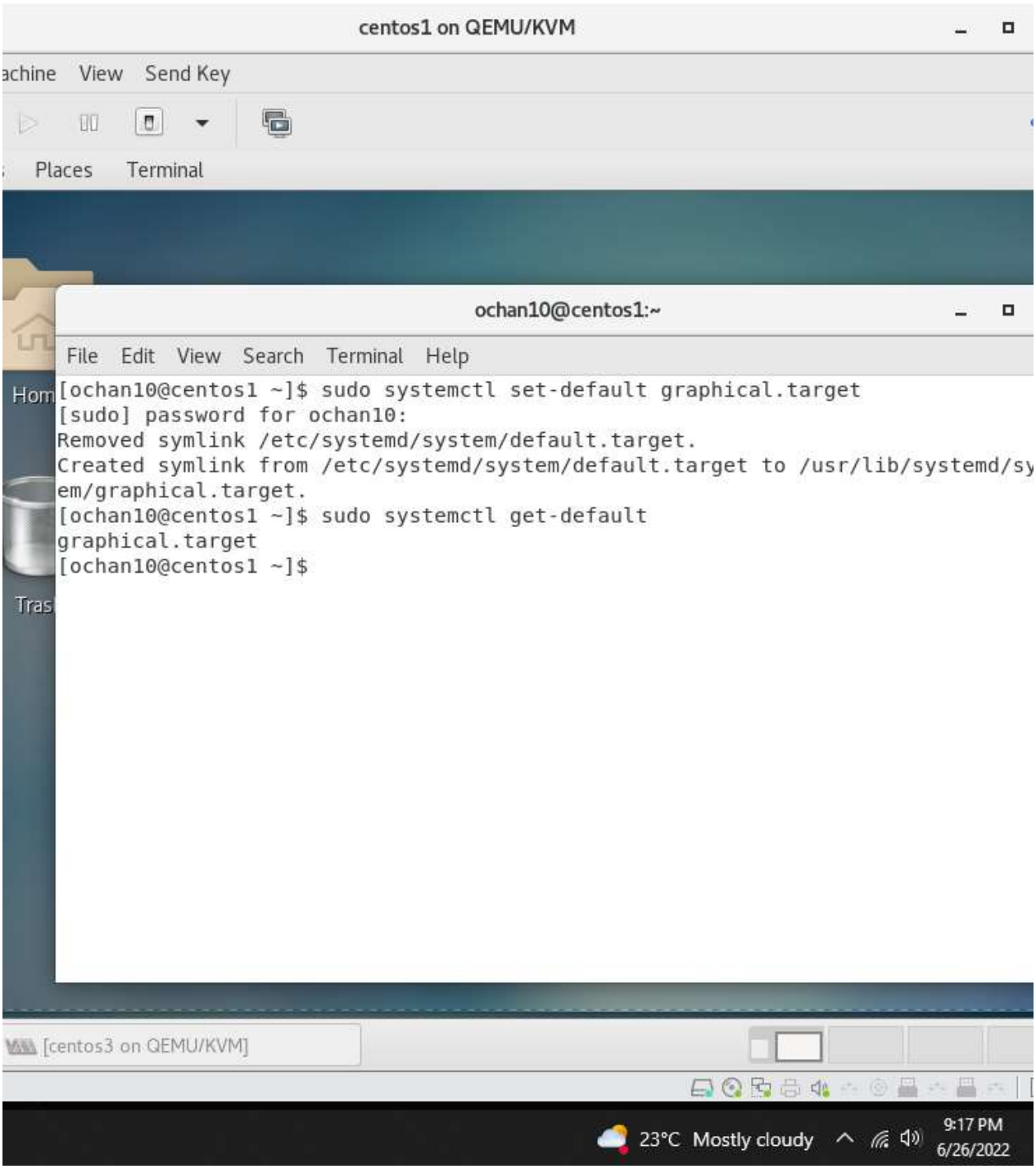
Sudo system isolate multi-user.target



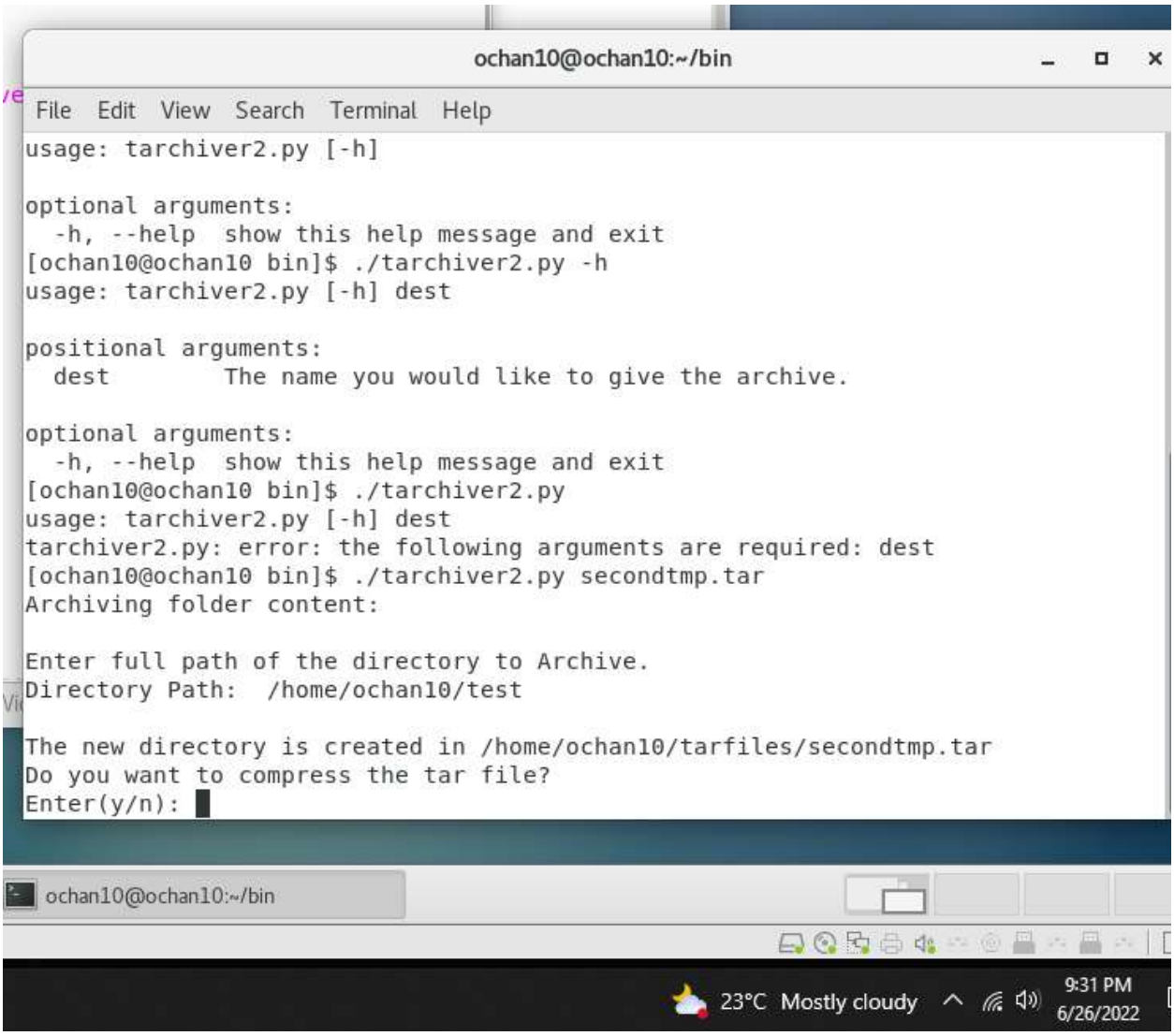
Centos3: systemctl isolate graphical.target



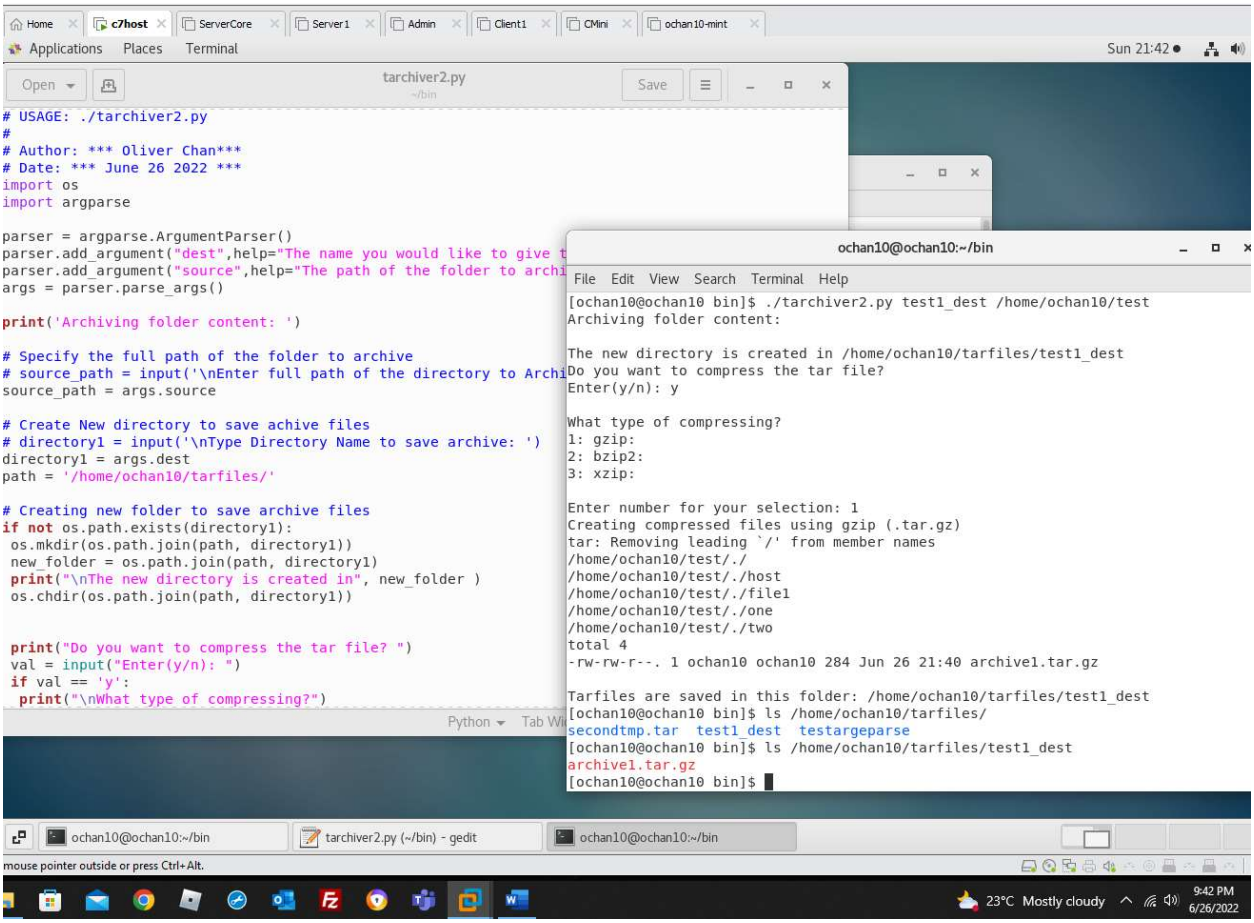
Set centos1 to graphical.target

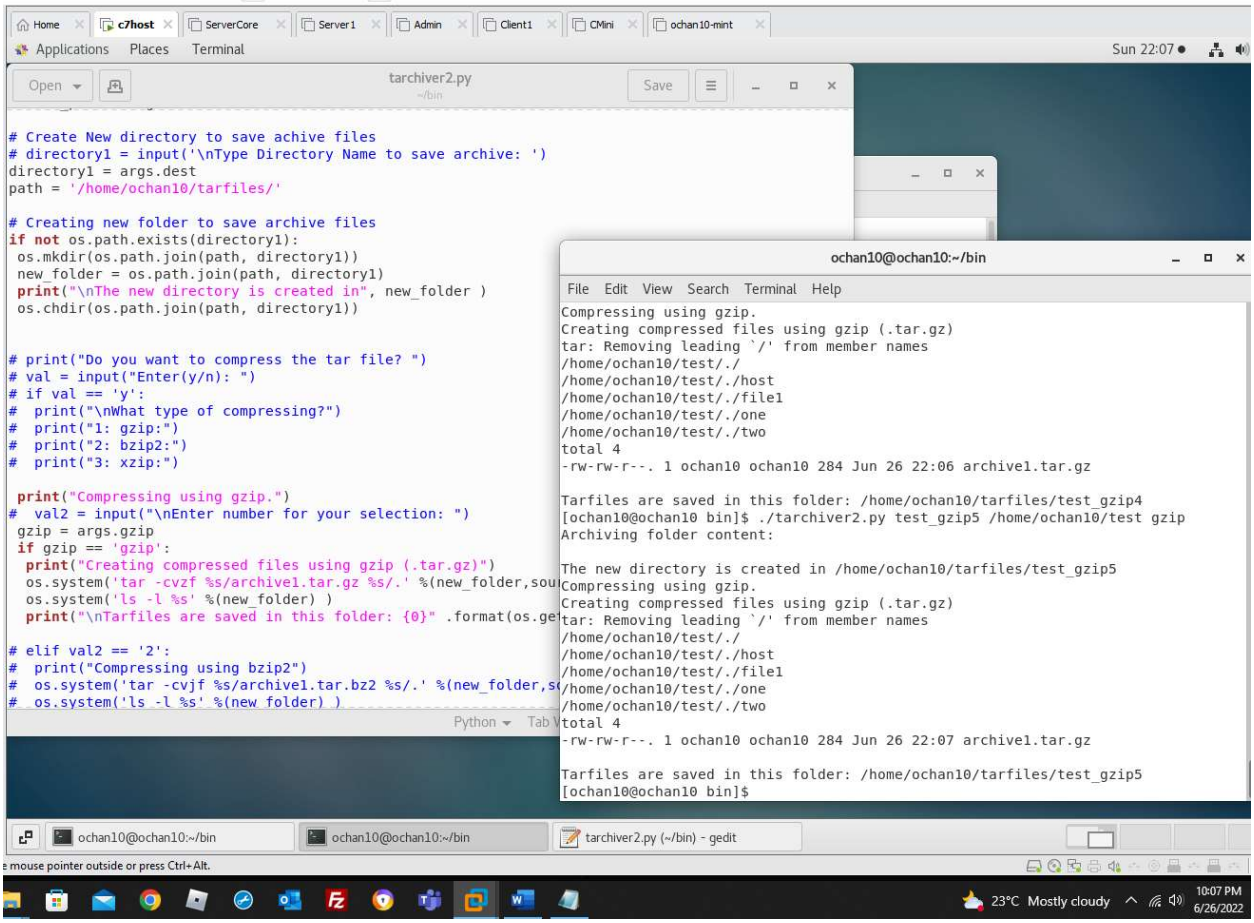


Investigation4:

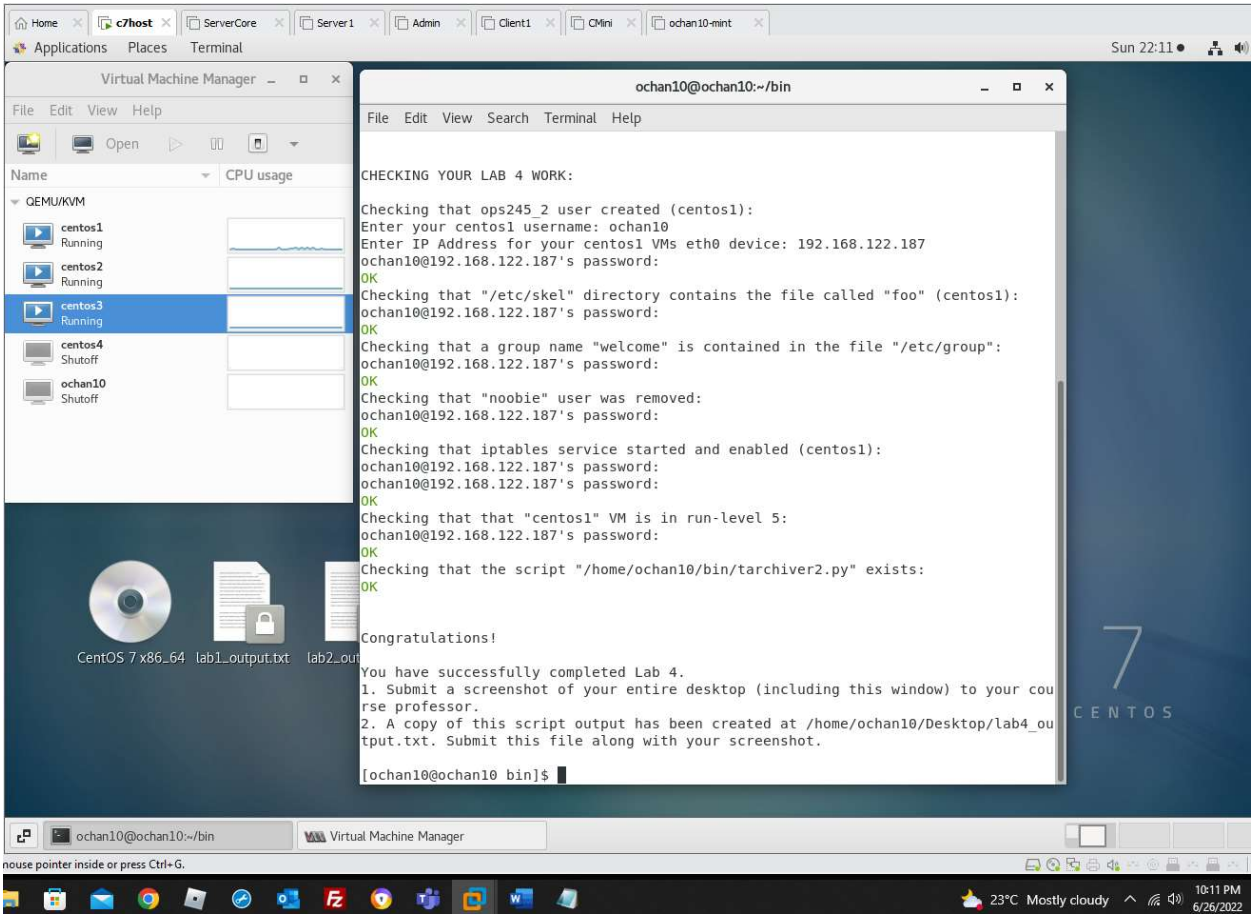


Add second parser.add_argument




Home
c7host
ServerCore
Server1
Admin
Client1
CMini
ochan10-mint
Applications
Places
Terminal
Sun 22:07
Open
tarchiver2.py
~/bin
Save
# Create New directory to save achive files
# directory1 = input('\nType Directory Name to save archive: ')
directory1 = args.dest
path = '/home/ochan10/tarfiles/'
# Creating new folder to save archive files
if not os.path.exists(directory1):
os.mkdir(os.path.join(path, directory1))
new_folder = os.path.join(path, directory1)
print("\nThe new directory is created in", new_folder)
os.chdir(os.path.join(path, directory1))
# print("Do you want to compress the tar file? ")
# val = input("Enter(y/n): ")
# if val == 'y':
# print("\nWhat type of compressing?")
# print("1: gzip:")
# print("2: bzip2:")
# print("3: xzip:")
print("Compressing using gzip.")
# val2 = input("\nEnter number for your selection: ")
gzip = args.gzip
if gzip == 'gzip':
print("Creating compressed files using gzip (.tar.gz)")
os.system('tar -cvzf %s/archive1.tar.gz %s/.' %(new_folder,sou
os.system('ls -l %s' %(new_folder))
print("\nTarfiles are saved in this folder: {0}" .format(os.ge
elif val2 == '2':
print("Compressing using bzip2")
os.system('tar -cvjf %s/archive1.tar.bz2 %s/.' %(new_folder,s
os.system('ls -l %s' %(new_folder))
Python
Tab
ochan10@ochan10:~/bin
File Edit View Search Terminal Help
Compressing using gzip.
Creating compressed files using gzip (.tar.gz)
tar: Removing leading `/' from member names
/home/ochan10/test/./
/home/ochan10/test/./host
/home/ochan10/test/./file1
/home/ochan10/test/./one
/home/ochan10/test/./two
total 4
-rw-rw-r--. 1 ochan10 ochan10 284 Jun 26 22:06 archive1.tar.gz
Tarfiles are saved in this folder: /home/ochan10/tarfiles/test_gzip4
[ochan10@ochan10 bin]$ ./tarchiver2.py test_gzip5 /home/ochan10/test gzip
Archiving folder content:
The new directory is created in /home/ochan10/tarfiles/test_gzip5
Compressing using gzip.
Creating compressed files using gzip (.tar.gz)
tar: Removing leading `/' from member names
/home/ochan10/test/./
/home/ochan10/test/./host
/home/ochan10/test/./file1
/home/ochan10/test/./one
/home/ochan10/test/./two
total 4
-rw-rw-r--. 1 ochan10 ochan10 284 Jun 26 22:07 archive1.tar.gz
Tarfiles are saved in this folder: /home/ochan10/tarfiles/test_gzip5
[ochan10@ochan10 bin]$
ochan10@ochan10:~/bin
ochan10@ochan10:~/bin
tarchiver2.py (~/bin) - gedit
e mouse pointer outside or press Ctrl+Alt.
23°C Mostly cloudy
10:07 PM
6/26/2022

Lab4 check:


Home
c7host
ServerCore
Server1
Admin
Client1
CMini
ochan10-mint
Applications
Places
Terminal
Sun 22:11
Virtual Machine Manager
File Edit View Help
Open
Name
CPU usage
QEMU/KVM
centos1 Running
centos2 Running
centos3 Running
centos4 Shutoff
ochan10 Shutoff
ochan10@ochan10:~/bin
File Edit View Search Terminal Help
CHECKING YOUR LAB 4 WORK:
Checking that ops245_2 user created (centos1):
Enter your centos1 username: ochan10
Enter IP Address for your centos1 VMs eth0 device: 192.168.122.187
ochan10@192.168.122.187's password:
OK
Checking that "/etc/skel" directory contains the file called "foo" (centos1):
ochan10@192.168.122.187's password:
OK
Checking that a group name "welcome" is contained in the file "/etc/group":
ochan10@192.168.122.187's password:
OK
Checking that "noobie" user was removed:
ochan10@192.168.122.187's password:
OK
Checking that iptables service started and enabled (centos1):
ochan10@192.168.122.187's password:
ochan10@192.168.122.187's password:
OK
Checking that that "centos1" VM is in run-level 5:
ochan10@192.168.122.187's password:
OK
Checking that the script "/home/ochan10/bin/tarchiver2.py" exists:
OK
Congratulations!
You have successfully completed Lab 4.
1. Submit a screenshot of your entire desktop (including this window) to your course professor.
2. A copy of this script output has been created at /home/ochan10/Desktop/lab4_output.txt. Submit this file along with your screenshot.
[ochan10@ochan10 bin]$
CentOS 7 x86_64
lab1_output.txt
CENTOS
ochan10@ochan10:~/bin
Virtual Machine Manager
23°C Mostly cloudy
10:11 PM
6/26/2022