

Institute of Computer Technology
B. Tech Computer Science and Engineering
Subject: BOSS (2CSE204)

PRACTICAL-10

AIM: - To learn about managing network in linux.

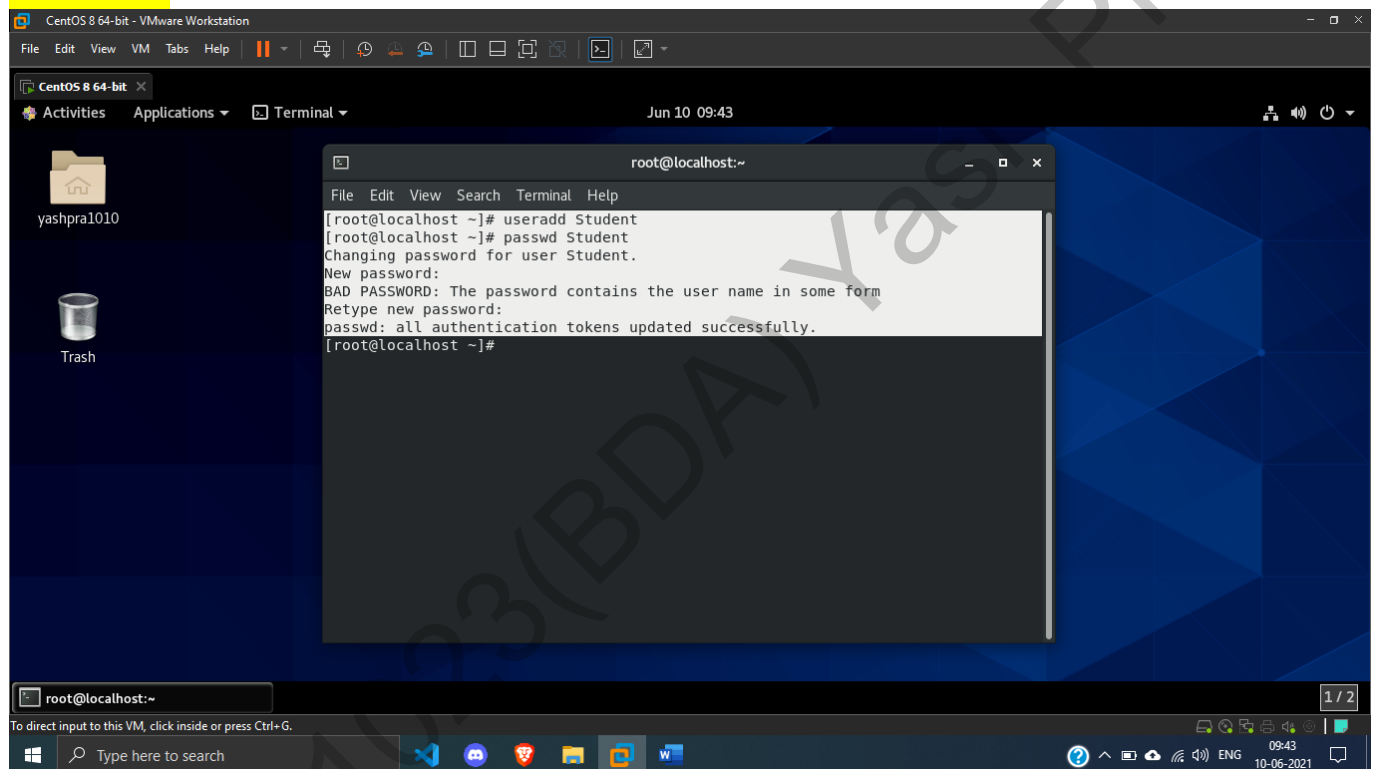
Commands:

- **nmcli** – This command is used for controlling network manager.
- **hostnamectl** – It is used for the administration of separate hosts on single system.

Exercise:

1. Create new user Student. Set password “student123”.

SOLUTION



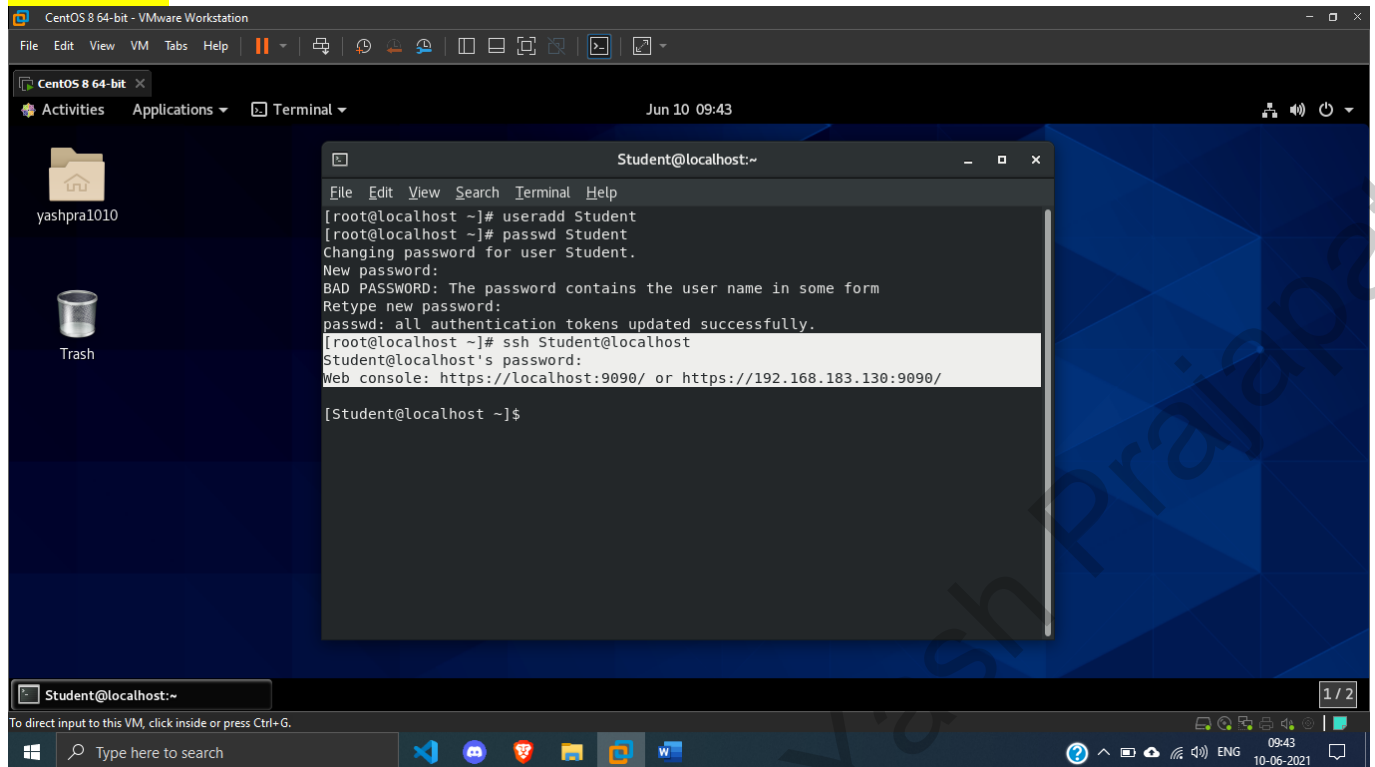
The screenshot shows a CentOS 8 64-bit virtual machine running in VMware Workstation. The desktop environment includes a file manager showing a folder named 'yashpra1010' and a 'Trash' icon. A terminal window is open, displaying the following commands and output:

```
root@localhost:~  
File Edit View Search Terminal Help  
[root@localhost ~]# useradd Student  
[root@localhost ~]# passwd Student  
Changing password for user Student.  
New password:  
BAD PASSWORD: The password contains the user name in some form  
Retype new password:  
passwd: all authentication tokens updated successfully.  
[root@localhost ~]#
```

The terminal window title is 'root@localhost:~'. The VMware Workstation interface shows the VM is running, with a status bar at the bottom indicating the date and time as 10-06-2021 09:43.

2. Use the ssh command to log in to localhost as the Student user.

SOLUTION

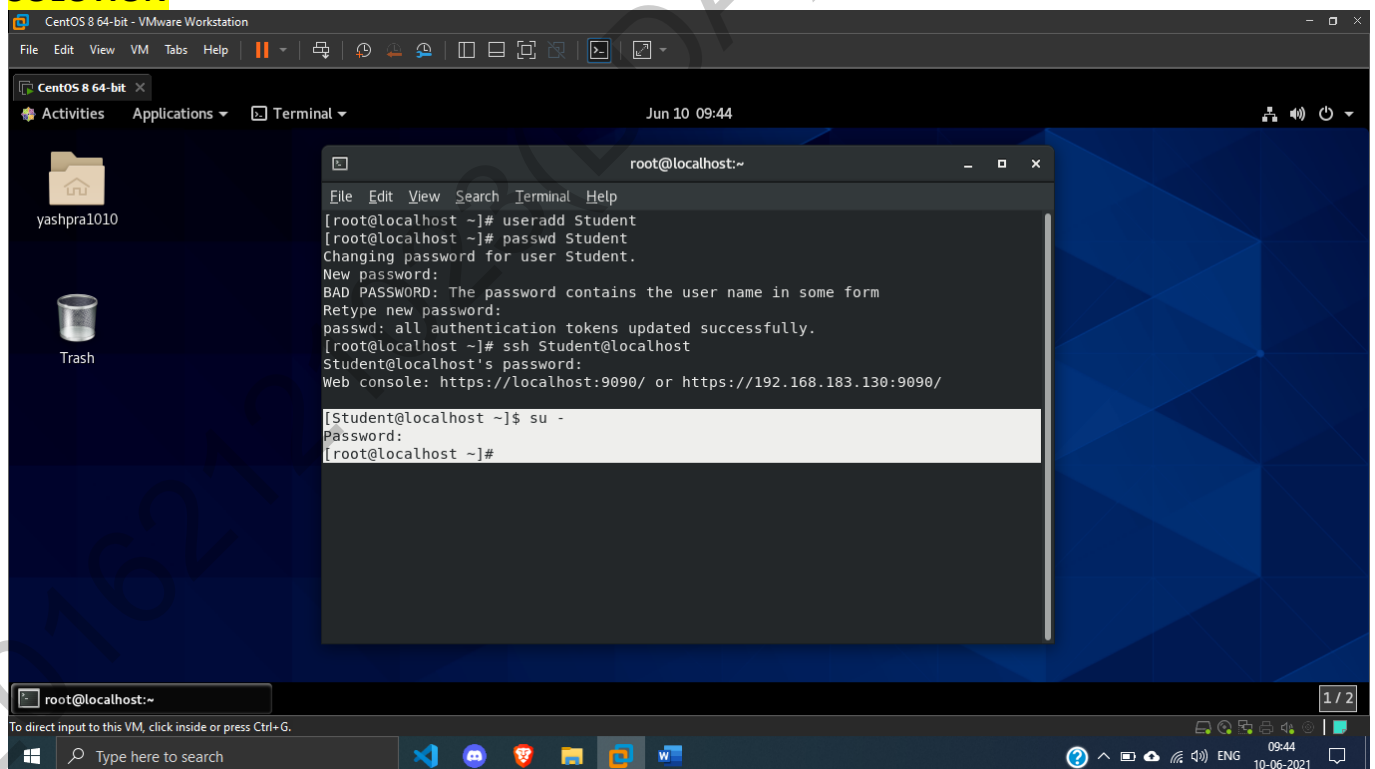


```
CentOS 8 64-bit - VMware Workstation
File Edit View VM Tabs Help
CentOS 8 64-bit x
Activities Applications Terminal Jun 10 09:43
yashpra1010
Trash
Student@localhost:~
File Edit View Search Terminal Help
[root@localhost ~]# useradd Student
[root@localhost ~]# passwd Student
Changing password for user Student.
New password:
BAD PASSWORD: The password contains the user name in some form
Retype new password:
passwd: all authentication tokens updated successfully.
[root@localhost ~]# ssh Student@localhost
Student@localhost's password:
Web console: https://localhost:9090/ or https://192.168.183.130:9090/

[Student@localhost ~]$
```

3. Switch to the root user.

SOLUTION



```
CentOS 8 64-bit - VMware Workstation
File Edit View VM Tabs Help
CentOS 8 64-bit x
Activities Applications Terminal Jun 10 09:44
yashpra1010
Trash
root@localhost:~
File Edit View Search Terminal Help
[root@localhost ~]# useradd Student
[root@localhost ~]# passwd Student
Changing password for user Student.
New password:
BAD PASSWORD: The password contains the user name in some form
Retype new password:
passwd: all authentication tokens updated successfully.
[root@localhost ~]# ssh Student@localhost
Student@localhost's password:
Web console: https://localhost:9090/ or https://192.168.183.130:9090/

[Student@localhost ~]$ su -
Password:
[root@localhost ~]#
```

4. Create a new connection with a static network connection using the settings in the table.

| PARAMETER | SETTING |
|-----------------|--|
| Connection name | lab |
| Interface name | ens3 (might vary, use the interface that has 52:54:00:00:fa:0b as its MAC address) |
| IP address | 172.25.250.11/24 |
| Gateway address | 172.25.250.254 |
| DNS address | 172.25.250.254 |

SOLUTION

```
CentOS 8 64-bit - VMware Workstation
File Edit View VM Tabs Help
CentOS 8 64-bit x
Activities Applications Terminal Jun 10 09:49
root@localhost:~
File Edit View Search Terminal Help
[root@localhost ~]# useradd Student
[root@localhost ~]# passwd Student
Changing password for user Student.
New password:
BAD PASSWORD: The password contains the user name in some form
Retype new password:
passwd: all authentication tokens updated successfully.
[root@localhost ~]# ssh Student@localhost
Student@localhost's password:
Web console: https://localhost:9090/ or https://192.168.183.130:9090/

[Student@localhost ~]$ su -
[root@localhost ~]# nmcli con add con-name lab ifname ens3 type ethernet ip4 172.25.250.11/24 gw4 172.25.250.254
Connection 'lab' (3d68d27e-d1ae-43e5-b57c-2ca306c59c54) successfully added.
[root@localhost ~]#
```

CentOS 8 64-bit - VMware Workstation

File Edit View VM Tabs Help

CentOS 8 64-bit

Activities Applications Terminal

Jun 10 09:51

root@localhost:~

File Edit View Search Terminal Help

802-3-ethernet.mtu: auto
802-3-ethernet.s390-subchannels: --
802-3-ethernet.s390-nettype: --
802-3-ethernet.s390-options: --
802-3-ethernet.wake-on-lan: default
802-3-ethernet.wake-on-lan-password: --
ipv4.method: manual
ipv4.dns: 172.25.250.254
ipv4.dns-search: --
ipv4.dns-options: --
ipv4.dns-priority: 0
ipv4.addresses: 172.25.250.11/24
ipv4.gateway: 172.25.250.254
ipv4.routes: --
ipv4.route-metric: -1
ipv4.route-table: 0 (unspec)
ipv4.routing-rules: --
ipv4.ignore-auto-routes: no
ipv4.ignore-auto-dns: no
ipv4.dhcp-client-id: --
ipv4.dhcp-iaid: --
ipv4.dhcp-timeout: 0 (default)
ipv4.dhcp-send-hostname: yes
ipv4.dhcp-hostname: --
ipv4.dhcp-fqdn: --
ipv4.dhcp-hostname-flags: 0x0 (none)
lines 33-58

root@localhost:~

To direct input to this VM, click inside or press Ctrl+G.

Type here to search

1 / 2

5. Configure the new connection to be autostarted. Other connections should not start automatically.

SOLUTION

CentOS 8 64-bit - VMware Workstation

File Edit View VM Tabs Help

CentOS 8 64-bit

Activities Applications Terminal

Jun 16 08:22

root@localhost:~

File Edit View Search Terminal Help

Changing password for user Student.
New password:
BAD PASSWORD: The password contains the user name in some form
Retype new password:
passwd: all authentication tokens updated successfully.
[root@localhost ~]# ssh Student@localhost
The authenticity of host 'localhost (:::1)' can't be established.
ECDSA key fingerprint is SHA256:qvfwOMaseLB9UX9FT8lVtp5+rhtmdVvTEHLYS189fs.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'localhost' (ECDSA) to the list of known hosts.
Student@localhost's password:
Activate the web console with: systemctl enable --now cockpit.socket
[Student@localhost ~]\$ su -
Password:
Last login: Wed Jun 16 08:16:48 IST 2021 on pts/0
[root@localhost ~]# nmcli con add con-name lab ifname ens3 type ethernet ip4 172.25.250.11/24 gw4 172.25.250.254
Connection 'lab' (297392db-2a8b-41d8-bfbf-65b97c97222b) successfully added.
[root@localhost ~]# nmcli con mod "lab" connection.autoconnect yes
[root@localhost ~]# nmcli con show lab
connection.id: lab
connection.uuid: 297392db-2a8b-41d8-bfbf-65b97c97222b
connection.stable-id: --
connection.type: 802-3-ethernet
connection.interface-name: ens3
connection.autoconnect: yes
connection.autoconnect-priority: 0
connection.autoconnect-retries: -1 (default)
connection.multi-connect: 0 (default)
connection.auth-retries: -1
connection.timestamp: 0
connection.read-only: no
connection.permissions: --
connection.zone: --
connection.master: --
connection.slave-type: --
connection.autoconnect-slaves: -1 (default)
connection.secondaries: --
connection.gateway-ping-timeout: 0
connection.metered: unknown
connection.lldp: default
connection.mdns: -1 (default)
connection.llmnr: -1 (default)
connection.wait-device-timeout: -1
root@localhost:~

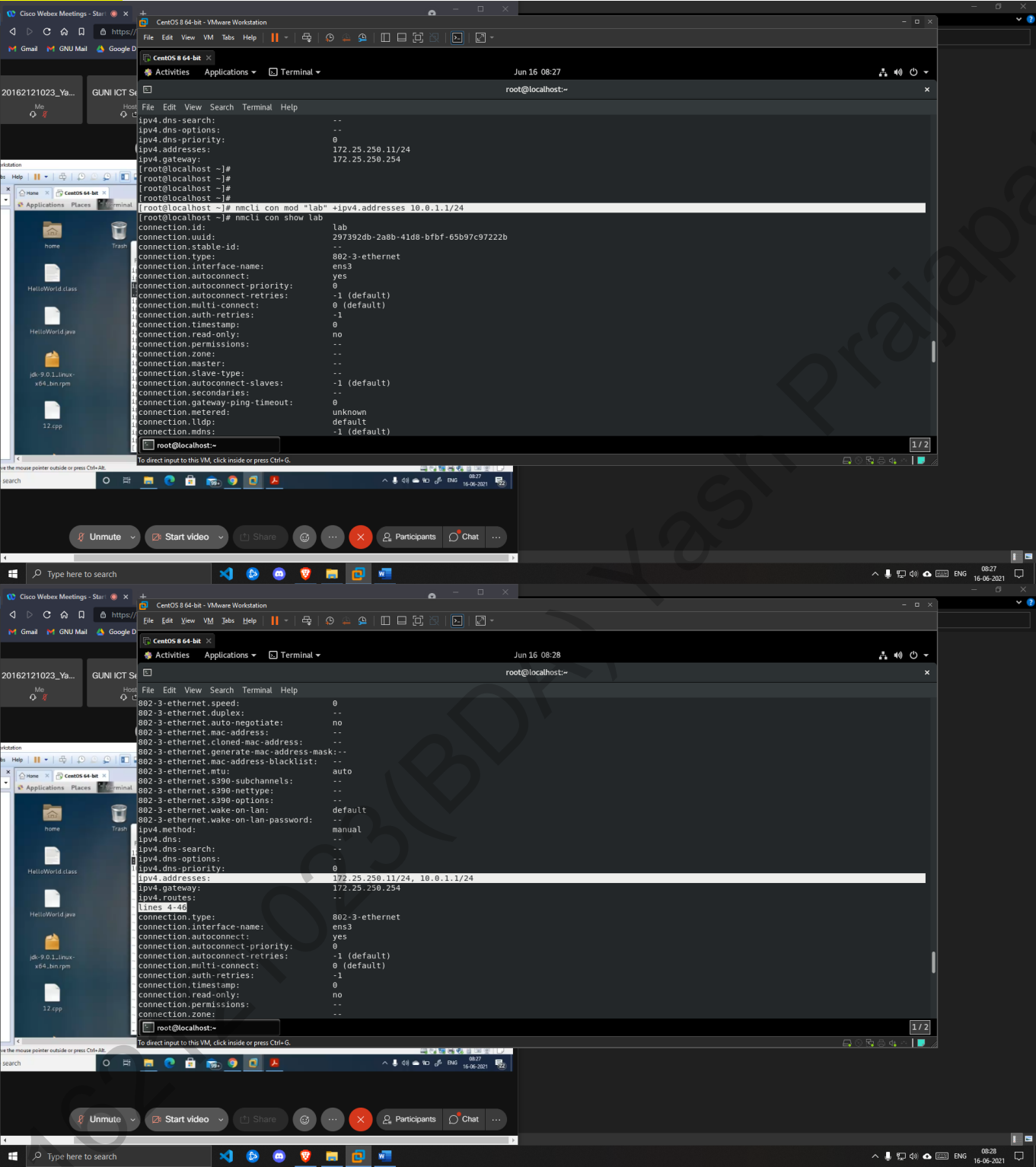
To direct input to this VM, click inside or press Ctrl+G.

Type here to search

1 / 2

6. Modify the new connection so that it also uses the address 10.0.1.1/24.

SOLUTION



7. Configure the hosts file so that 10.0.1.1 can be referenced as private.

SOLUTION

