

Hands on Assignment

Task 1:

```
root@sigmoid-ThinkPad-T470:~# systemctl status sendmail
```

- sendmail.service - LSB: powerful, efficient, and scalable Mail Transport Agent
 - Loaded: loaded (/etc/init.d/sendmail; generated)
 - Active: active (running) since Fri 2024-10-11 11:21:23 IST; 1h 7min ago
 - Docs: man:systemd-sysv-generator(8)
 - Process: 1805 ExecStart=/etc/init.d/sendmail start (code=exited, status=0/SUCCESS)
 - Tasks: 1 (limit: 9112)
 - Memory: 6.4M
 - CGroup: /system.slice/sendmail.service
 - └─2974 sendmail: MTA: accepting connections

```
Oct 11 11:21:23 sigmoid-ThinkPad-T470 sendmail[1805]: ...done.
```

```
Oct 11 11:21:23 sigmoid-ThinkPad-T470 systemd[1]: Started LSB: powerful, efficient, and scalable Mail Transport Agent.
```

```
root@sigmoid-ThinkPad-T470:~# nano email.txt
```

```
root@sigmoid-ThinkPad-T470:~# cat email.txt
```

To:shashank.hl@sigmoidanalytics.com

Subject:"This is a test email"

Hello world

welcome to sigmoid

```
root@sigmoid-ThinkPad-T470:~# sendmail -t < email.txt
```

```
root@sigmoid-ThinkPad-T470:~# sudo tail -f /var/log/mail.log | grep -E "from=s|to=s"
```

```
Oct 11 12:32:57 sigmoid-ThinkPad-T470 sendmail[4375]: 49B72vba004375: from=sigmoid, size=102, class=0, nrcpts=1,
```

```
msgid=<202410110702.49B72vba004375@sigmoid-ThinkPad-T470>, relay=root@localhost
```

```
Oct 11 12:32:57 sigmoid-ThinkPad-T470 sendmail[4375]: 49B72vba004375:
```

```
to=shashank.hl@sigmoidanalytics.com, ctladdr=sigmoid (1000/1000), delay=00:00:00,
```

```
xdelay=00:00:00, mailer=relay, pri=30102, relay=[127.0.0.1] [127.0.0.1], dsn=2.0.0, stat=Sent (49B72vjg004390 Message accepted for delivery)
```

Task 2:

```
root@sigmoid-ThinkPad-T470: /  
root@sigmoid-ThinkPad-T470:/# adduser shashank  
Adding user `shashank' ...  
Adding new group `shashank' (1001) ...  
Adding new user `shashank' (1001) with group `shashank' ...  
Creating home directory `/home/shashank' ...  
Copying files from `/etc/skel' ...  
New password:  
Retype new password:  
passwd: password updated successfully  
Changing the user information for shashank  
Enter the new value, or press ENTER for the default  
    Full Name []: shashank  
    Room Number []: 294  
    Work Phone []: 080  
    Home Phone []: 010  
    Other []: 0  
Is the information correct? [Y/n] y  
root@sigmoid-ThinkPad-T470:/# su shashank  
shashank@sigmoid-ThinkPad-T470:/$ sudo ls  
[sudo] password for shashank:  
shashank is not in the sudoers file. This incident will be reported.  
shashank@sigmoid-ThinkPad-T470:/$ exit  
exit  
root@sigmoid-ThinkPad-T470:/# cd / | cat /etc/group | grep sudo  
sudo:x:27:sigmoid  
root@sigmoid-ThinkPad-T470:/#
```

Task 3:

```
sigmoid@sigmoid-ThinkPad-T470: ~  
sigmoid@sigmoid-ThinkPad-T470:~$ alias describe='ls -R'  
sigmoid@sigmoid-ThinkPad-T470:~$ cd Downloads  
sigmoid@sigmoid-ThinkPad-T470:~/Downloads$ describe  
.:  
12-Soft+Link+and+Hard+Links.pdf      Complete+Linux+Training+Syllabus.pdf  
  Shashank_H_L_TAS294_Employment_Letter_20241001_121842_a66fb9b4aea21b.pdf  
9-Change+Password+in+Linux.pdf        google-chrome-stable_current_amd64.de  
b  virtualbox-7.1_7.1.2-164945~Ubuntu~focal_amd64.deb  
a66f504e74860b_shashank_hl.png        passport3.pdf  
  VMware-Workstation-Full-17.5.2-23775571.x86_64.bundle  
CentOS-Stream-9-latest-x86_64-dvd1.iso 'passport application_f_041314.pdf'  
sigmoid@sigmoid-ThinkPad-T470:~/Downloads$ cd ..  
sigmoid@sigmoid-ThinkPad-T470:~$
```

Task 4:

```
root@sigmoid-ThinkPad-T470: /
root@sigmoid-ThinkPad-T470:/# ls -l > research
root@sigmoid-ThinkPad-T470:/# ls -l | grep research
-rw-r--r--  1 root root      1565 Oct  8 14:05 research
root@sigmoid-ThinkPad-T470:/# gzip research
root@sigmoid-ThinkPad-T470:/# ls -l | grep research.gz
-rw-r--r--  1 root root       439 Oct  8 14:05 research.gz
root@sigmoid-ThinkPad-T470:/# cat find-decompress
#!/bin/bash

research_file=$(find / -name "research.*" 2>/dev/null)

if [[ -z "$research_file" ]]; then
    echo "No file found with the name 'research'."
    exit 1
fi

echo "Found file: $research_file"

file_type=$(file -b "$research_file")

if [[ $file_type == *"gzip compressed data"* ]]; then
    echo "Decompressing gzip file..."
    gzip -d "$research_file"
else
    echo "Unknown compression type or not a compressed file."
fi

root@sigmoid-ThinkPad-T470:/# ./find-decompress
Found file: /research.gz
Decompressing gzip file...
root@sigmoid-ThinkPad-T470:/# ls -l | grep research
-rw-r--r--  1 root root      1565 Oct  8 14:05 research
```

Task 5:

```
sigmoid@sigmoid-ThinkPad-T470: ~  
root@sigmoid-ThinkPad-T470:~# nano /etc/bash.bashrc  
root@sigmoid-ThinkPad-T470:~# source /etc/bash.bashrc  
root@sigmoid-ThinkPad-T470:~# exit  
logout  
sigmoid@sigmoid-ThinkPad-T470:~$ umask  
0777  
sigmoid@sigmoid-ThinkPad-T470:~$ touch testfile  
sigmoid@sigmoid-ThinkPad-T470:~$ ls -l | grep testfile  
----- 1 sigmoid sigmoid  0 Oct 11 12:07 testfile  
sigmoid@sigmoid-ThinkPad-T470:~$ echo "Hello World" > testfile  
bash: testfile: Permission denied  
sigmoid@sigmoid-ThinkPad-T470:~$
```

Task 6:

```
root@sigmoid-ThinkPad-T470: /
root@sigmoid-ThinkPad-T470:/# nano /usr/local/bin/showtime.sh
root@sigmoid-ThinkPad-T470:/# chmod +x /usr/local/bin/showtime.sh
root@sigmoid-ThinkPad-T470:/# cat /usr/local/bin/showtime.sh
#!/bin/bash

# Creating a log file in the user's home directory
LOGFILE="showtime.log"

while true; do
    echo "$(date)" >> "$LOGFILE"
    sleep 60
done
root@sigmoid-ThinkPad-T470:/# nano /etc/systemd/system/showtime.service
root@sigmoid-ThinkPad-T470:/# cat /etc/systemd/system/showtime.service
[Unit]
Description=Showtime Service

[Service]
Type=simple
ExecStart=/usr/local/bin/showtime.sh
User=root
Restart=always

[Install]
WantedBy=multi-user.target
root@sigmoid-ThinkPad-T470:/# sudo systemctl daemon-reload
root@sigmoid-ThinkPad-T470:/# sudo systemctl start showtime.service
root@sigmoid-ThinkPad-T470:/# sudo systemctl status showtime.service
● showtime.service - Showtime Service
   Loaded: loaded (/etc/systemd/system/showtime.service; disabled; vendor pre>
   Active: active (running) since Tue 2024-10-08 18:11:37 IST; 7s ago
     Main PID: 9766 (showtime.sh)
        Tasks: 2 (limit: 9112)
       Memory: 508.0K
         CGroup: /system.slice/showtime.service
                 └─9766 /bin/bash /usr/local/bin/showtime.sh
                 └─9768 sleep 60
```

```
root@sigmoid-ThinkPad-T470:/# cat showtime.log
Tuesday 08 October 2024 06:11:37 PM IST
Tuesday 08 October 2024 06:12:37 PM IST
Tuesday 08 October 2024 06:13:37 PM IST
Tuesday 08 October 2024 06:14:37 PM IST
Tuesday 08 October 2024 06:15:37 PM IST
Tuesday 08 October 2024 06:16:37 PM IST
Tuesday 08 October 2024 06:17:37 PM IST
root@sigmoid-ThinkPad-T470:/# sudo systemctl stop showtime.service
root@sigmoid-ThinkPad-T470:/#
```