

Assignment - 6

Question: Create a service with the name **showtime** , after starting the service, every minute it should print the current time in a file in the user home directory.

Ex:-

sudo service showtime start -> It should start writing in file.

sudo service showtime stop -> It should stop writing in file.

sudo service showtime status -> It should show status.

Solution:

To achieve this we can write a script which writes current time in users home directory.

And then create a systemd service unit file which manage the execution of that script.

After creating the systemd we can start stop and check the status of service as per the requirements.

Steps:

1. For creating service we need sudo access so first switch user to root or we can also do that sudo access users.

>> sudo su

```
sigmoid@sigmoid:~$ sudo su
[sudo] password for sigmoid:
root@sigmoid:/home/sigmoid#
```

2. switch to home directory of the root user using cd command.

>> cd

```
root@sigmoid:/home/sigmoid# cd
root@sigmoid:~#
```

3. Create a script file like showtime.sh using file editor like vim or nano (giving .sh extension is not mandatory to increase the readability we can do that).

>> nano showtime.sh

```
root@sigmoid:~# nano showtime.sh
```

4. create a scripts which writes current time in a file after every minutes in user's home directory here user is root so it will write in root's home directory with filename showtime.txt

So script is like :

```
#!/bin/bash
while true;
do
echo $(date +%T) >> /root/showtime.txt
sleep 60
done
```

Assignment - 6

```
#!/bin/bash

while true;
do
echo $(date +%T) >> /root/showtime.txt
sleep 60
done
```

Script has been completed. Now we will create service.

5. To create a systemd service we have to change the directory to /etc/systemd/system

>> cd /etc/systemd/system

```
root@sigmoid:~# cd /etc/systemd/system
root@sigmoid:/etc/systemd/system#
```

6. create a systemd unit file with showtime name (eg. showtime.service) using file editor.

>> nano showtime.service

```
root@sigmoid:/etc/systemd/system# nano showtime.service
```

7. Write all the required configurations like:

[Unit]

Description=Showtime Service

After=network.target

[Service]

Type=simple

ExecStart=/root/showtime.sh

Restart=always

[Install]

WantedBy=multi-user.target

```
[Unit]
Description=Showtime Service
After=network.target

[Service]
Type=simple
ExecStart=/root/showtime.sh
Restart=always

[Install]
WantedBy=multi-user.target
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Assignment - 6

8. Now reload and start the systemd service using systemctl commands:

- To reload the systemd configuration files to apply changes in services:
>> systemctl daemon-reload

```
root@sigmoid:/etc/systemd/system# systemctl daemon-reload
```

- To start the showtime service :
>> systemctl start showtime

```
root@sigmoid:~# systemctl start showtime
```

The system get started it will start writing current time in showtime.txt file in user's home directory.

```
root@sigmoid:~# cat showtime.txt
15:55:53
15:56:53
15:57:53
root@sigmoid:~#
```

9. To check the status of service we uses systemctl status showtime.

>> systemctl status showtime

```
root@sigmoid:~# systemctl status showtime
○ showtime.service - Showtime Service
   Loaded: loaded (/etc/systemd/system/showtime.service; enabled; preset: enabled)
   Active: inactive (dead) since Sat 2024-02-10 14:54:16 IST; 13s ago
     Duration: 3min 34.591s
    Process: 105301 ExecStart=/root/showtime.sh (code=killed, signal=TERM)
   Main PID: 105301 (code=killed, signal=TERM)
      CPU: 38ms
```

10. To stop the service we can use systemctl stop showtime.

>> systemctl stop showtime

```
15:57:53
root@sigmoid:~# systemctl stop showtime
root@sigmoid:~# systemctl status showtime
○ showtime.service - Showtime Service
   Loaded: loaded (/etc/systemd/system/showtime.service; enabled; preset: enabled)
   Active: inactive (dead) since Sat 2024-02-10 15:59:29 IST; 10s ago
     Duration: 3min 36.493s
    Process: 111430 ExecStart=/root/showtime.sh (code=killed, signal=TERM)
   Main PID: 111430 (code=killed, signal=TERM)
      CPU: 41ms

Feb 10 15:55:53 sigmoid systemd[1]: Started showtime.service - Showtime Service.
Feb 10 15:59:29 sigmoid systemd[1]: Stopping showtime.service - Showtime Service...
Feb 10 15:59:29 sigmoid systemd[1]: showtime.service: Deactivated successfully.
Feb 10 15:59:29 sigmoid systemd[1]: Stopped showtime.service - Showtime Service.
root@sigmoid:~#
```