Task 3: Mini Server Monitor Script

1. Install `nginx` :

```
sudo apt update
sudo apt install nginx -y
```

2. Create the script `monitor.sh` :

```
nano ~/monitor.sh
```

```
#!/bin/bash

LOGFILE="/var/log/monitor.log"
TIMESTAMP=$(date "+%Y-%m-%d %H:%M:%S")

echo "==== [$TIMESTAMP] Server Monitor Check ====" >> "$LOGFILE"

if systemctl is-active --quiet nginx; then

echo "[$TIMESTAMP] nginx is running." >> "$LOGFILE"

else

echo "[$TIMESTAMP] nginx is NOT running. Attempting to start..." >>
"$LOGFILE"

systemctl start nginx

if systemctl is-active --quiet nginx; then

echo "[$TIMESTAMP] nginx started successfully." >> "$LOGFILE"

else
echo "[$TIMESTAMP] Failed to start nginx." >> "$LOGFILE"
fi
fi

echo "[$TIMESTAMP] Memory Usage:" >> "$LOGFILE"

free -h >> "$LOGFILE"

echo "[$TIMESTAMP] CPU Load:" >> "$LOGFILE"
```

uptime >> "$LOGFILE"

echo "[$TIMESTAMP] Disk Usage:" >> "$LOGFILE"

df -h / >> "$LOGFILE"

echo "" >> "$LOGFILE"

chmod +x ~/monitor.sh

3. Give log file write permission

sudo touch /var/log/monitor.log

sudo chmod 666 /var/log/monitor.log

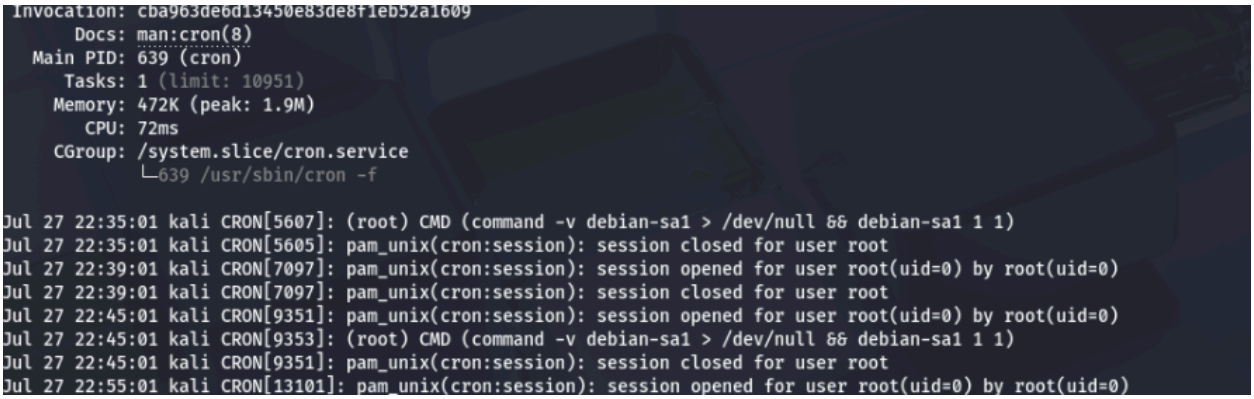
4. Add the script to crontab:

crontab -e

5. Confirm cron is running:

sudo systemctl status cron


(hari㉿kali)-[~]
$ sudo apt update
sudo apt install nginx -y
[sudo] password for hari:
Hit:1 http://http.kali.org/kali kali-rolling InRelease
All packages are up to date.
nginx is already the newest version (1.26.3-3).
nginx set to manually installed.
The following packages were automatically installed and are no longer required:
python3-packaging-whl python3-pyinstaller-hooks-contrib python3-wheel-whl
Use 'sudo apt autoremove' to remove them.
Summary:
Upgrading: 0, Installing: 0, Removing: 0, Not Upgrading: 0
(hari㉿kali)-[~]
$ nano ~/monitor.sh
(hari㉿kali)-[~]
$ chmod +x ~/monitor.sh
(hari㉿kali)-[~]
$ sudo touch /var/log/monitor.log
sudo chmod 666 /var/log/monitor.log
(hari㉿kali)-[~]
$ crontab -e
no crontab for hari - using an empty one
Select an editor. To change later, run select-editor again.
1. /bin/nano <---- easiest
2. /usr/bin/vim.basic
3. /usr/bin/vim.tiny
Choose 1-3 [1]: 1
crontab: installing new crontab
(hari㉿kali)-[~]
$ sudo systemctl status cron
● cron.service - Regular background program processing daemon
Loaded: loaded (/usr/lib/systemd/system/cron.service; enabled; preset: enabled)
Active: active (running) since Sun 2025-07-27 22:27:36 EDT; 35min ago
Invocation: cba963de6d13450e83de8f1eb52a1609
Docs: man:cron(8)
Main PID: 639 (cron)
Tasks: 1 (limit: 10951)
Memory: 472K (peak: 1.9M)
CPU: 72ms



Conclusion: Task 3 created a `monitor.sh` script to check `nginx` status, show system resource usage, and log results with timestamps. It was scheduled via cron to run every 5 minutes, enabling basic automated server monitoring.