

My Script:  
#!/bin/bash

log\_file="/var/log/syslog" # Replace with the actual log file path

# Initialize variables

wifi\_connection\_count=0

ntp\_timeout\_count=0

fingerprint\_error=0

apparmor\_denied\_count=0

kerneloops\_error=0

network\_manager\_state\_changes=()

network\_manager\_states=()

services\_started=()

services\_failed=()

services\_deactivated=()

device\_errors=()

# Process the log file line by line

while IFS= read -r line; do

# Wi-Fi connection attempts

if [[ "\$line" == \*"NetworkManager[770]: <info> [1742791717.9370] device (wlp2s0): Activation: starting connection 'AM-235'"\* ]]; then

wifi\_connection\_count=\$((wifi\_connection\_count + 1))

fi

# NTP timeouts

if [[ "\$line" == \*"systemd-timesyncd[760]: Timed out waiting for reply from"\* ]]; then

ntp\_timeout\_count=\$((ntp\_timeout\_count + 1))

fi

# Fingerprint errors

if [[ "\$line" == \*"gnome-shell[1153]: JS ERROR: Failed to initialize fprintd service: Gio.IOErrorEnum: GDBus.Error:net.reactivated.Fprint.Error.NoSuchDevice: No devices available"\* ]]; then

fingerprint\_error=1

fi

#Apparmor denials

if [[ "\$line" == \*"apparmor="DENIED"\* ]]; then

apparmor\_denied\_count=\$((apparmor\_denied\_count + 1))

fi

# kerneloops errors

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if [[ "$line" == *"kerneloops.service: Found left-over process"* ]]; then
    kerneloops_error=1
fi

# NetworkManager state changes
if [[ "$line" == *"NetworkManager[770]: <info> [1742791718.*" ]]; then
    if [[ "$line" == *"state change:.*" ]]; then
        network_manager_state_changes+=("$line")
        state=$(echo "$line" | grep -o "state change: [a-z-]*" | cut -d ':' -f 2 | xargs)
        network_manager_states+=("$state")
    fi
fi

# Services starting
if [[ "$line" == *"systemd[1]: Starting *" ]]; then
    service=$(echo "$line" | grep -o "Starting [a-zA-Z0-9.-]*" | cut -d ' ' -f 2)
    services_started+=("$service")
fi

# Services failing
if [[ "$line" == *"Activated service '*failed*' ]]; then
    service=$(echo "$line" | grep -o "Activated service '[a-zA-Z0-9.-]*' failed" | cut -d '"' -f 2)
    services_failed+=("$service")
fi

# Services deactivating
if [[ "$line" == *"Deactivated successfully.*" ]]; then
    service=$(echo "$line" | grep -o "[a-zA-Z0-9.-]*.service: Deactivated successfully." | cut -d ':' -f 1)
    services_deactivated+=("$service")
fi

# Device errors
if [[ "$line" == *"not supported by any plugin"* ]]; then
    device=$(echo "$line" | grep -o "'/sys/devices/[^']*'" | cut -d '"' -f 2)
    device_errors+=("$device")
fi

done < "$log_file"

# Output usage data
echo "Log File Analysis:"
echo "-----"
echo "Wi-Fi Connection Attempts: $wifi_connection_count"

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echo "NTP Timeout Count: $ntp_timeout_count"
if [[ "$fingerprint_error" -eq 1 ]]; then
    echo "Fingerprint Device Error: Yes"
else
    echo "Fingerprint Device Error: No"
fi
echo "AppArmor Denied Count: $apparmor_denied_count"

if [[ "$kerneloops_error" -eq 1 ]]; then
    echo "Kerneloops Error: Yes"
else
    echo "Kerneloops Error: No"
fi

echo ""
echo "NetworkManager State Changes:"
for state in "${network_manager_states[@]}"; do
    echo " - $state"
done

echo ""
echo "Services Started:"
for service in "${services_started[@]}"; do
    echo " - $service"
done

echo ""
echo "Services Failed to Start:"
for service in "${services_failed[@]}"; do
    echo " - $service"
done

echo ""
echo "Services Deactivated:"
for service in "${services_deactivated[@]}"; do
    echo " - $service"
done

echo ""
echo "Device Errors:"
for device in "${device_errors[@]}"; do
    echo " - $device"
done
```

OUTPUT:

```
akask@akask-Vostro-3491: ~/DevOps1/hw2-heartbeat-Mlstuk2000
- Update
- Download
- Process
- Discard
- Time
- Cleanup
- Network
- Network
- Daily
- Hostname
- Network
- Process
- Message
- Network
- Network

Services Failed to Start:
- org.freedesktop.systemd1

Services Deactivated:
- logrotate.service
- dmesg.service
- whoopsie.service
- NetworkManager-dispatcher.service
- systemd-hostnamed.service
- systemd-update-utmp-runlevel.service
- systemd-timedated.service
-
- fprintd.service
- 121.service
-
- 121.service
- systemd-localed.service
- systemd-hostnamed.service
- geoclue.service
- apt-news.service
- esm-cache.service
- esm-cache.service
- apt-news.service
```

```
akask@akask-Vostro-3491: ~/DevOps1/hw2-heartbeat-Mistuk2000
-
- fprintd.service
- 121.service
-
- 121.service
- systemd-locale.service
- systemd-hostnamed.service
- geoclue.service
- apt-news.service
- esm-cache.service
- esm-cache.service
- apt-news.service
- update-notifier-download.service
- apport-autoreport.service
- whoopsie.service
- anacron.service
- fstrm.service
- systemd-timedated.service
- systemd-tmpfiles-clean.service
- NetworkManager-dispatcher.service
- anacron.service
- NetworkManager-dispatcher.service
- apt-daily-upgrade.service
- systemd-hostnamed.service
-
- NetworkManager-dispatcher.service
- apport-autoreport.service
- whoopsie.service
- motd-news.service
- NetworkManager-dispatcher.service
- NetworkManager-dispatcher.service
- anacron.service

Device Errors:
- /sys/devices/pci0000:00/0000:00:14.0/usb1/1-5
- /sys/devices/pci0000:00/0000:00:1d.0/0000:01:00.0
- /sys/devices/pci0000:00/0000:00:1d.1/0000:02:00.0
(base) akask@akask-Vostro-3491:~/DevOps1/hw2-heartbeat-Mistuk2000$
```