

Pi 5 System Summary Script with AWK

Date: May 25th, 2025

Category: Linux Scripting / System Monitoring

I wrote this script after studying `awk`. This command is really powerful in scripting. I have a good understanding of using the command to extract data fields from CSV files, and live system data. Here is my project I made using `awk`.

Script Overview

- Gathers:
 - Timestamp
 - IP Address
 - Hostname
 - Uptime (human-readable)
 - Disk usage, total, free
 - Memory usage, total, free
- Outputs to both screen and log file
- Uses `awk`, `df`, `free`, `uptime`, and `tee`

Script: `pi5-system-summary.sh`

```
#!/bin/bash
```

```
LOGFILE=~/.pi5-summary-$(date +%Y-%m-%d).log
```

```
TIMESTAMP=$(date '+%Y-%m-%d %H:%M:%S')
```

```
HOSTNAME=$(hostname)
```

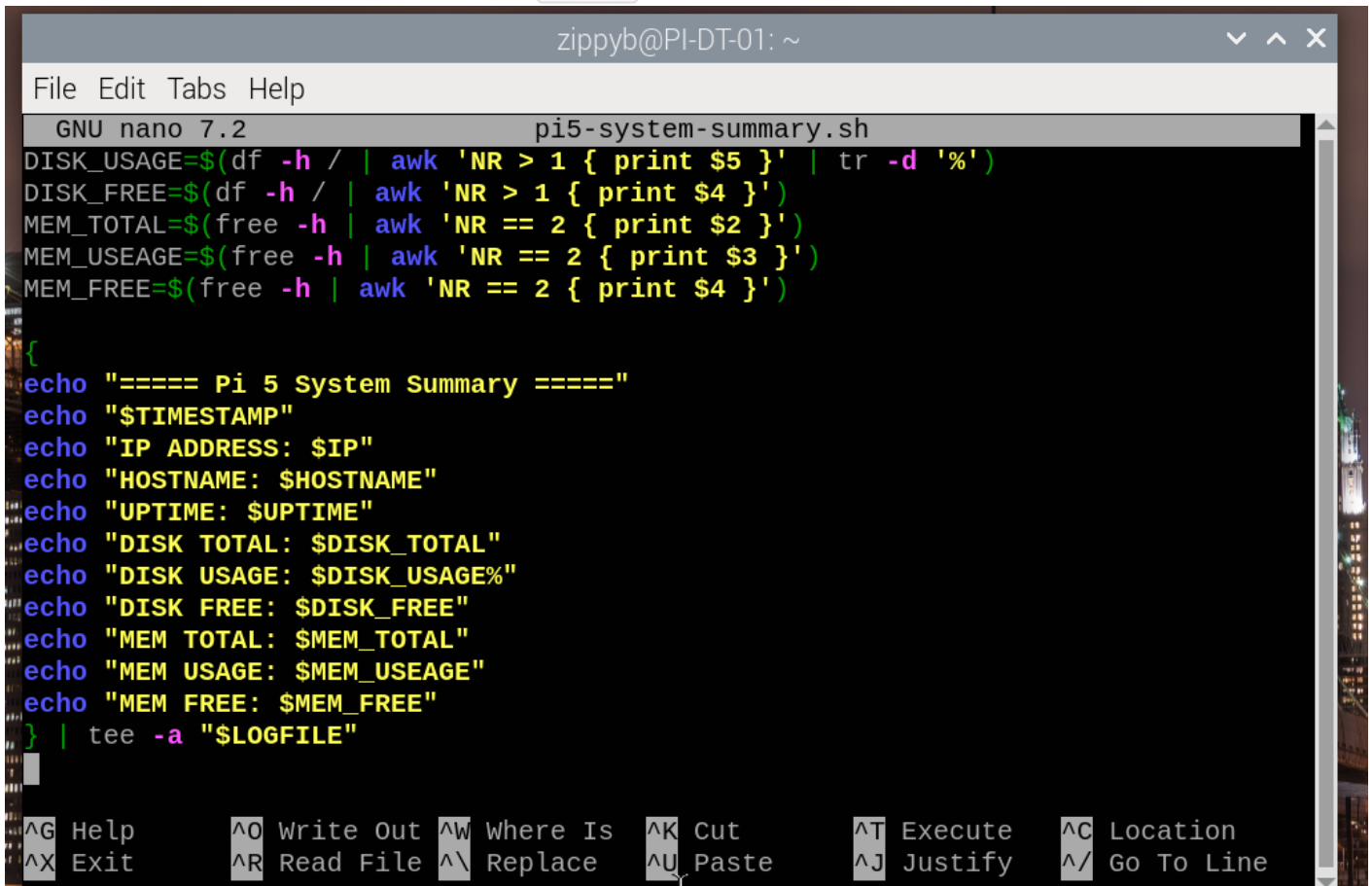
```
IP=$(hostname -I | awk '{ print $1 }')
UPTIME=$(uptime -p)
DISK_TOTAL=$(df -h / | awk 'NR > 1 { print $2 }')
DISK_USAGE=$(df -h / | awk 'NR > 1 { print $5 }' | tr -d '%')
DISK_FREE=$(df -h / | awk 'NR > 1 { print $4 }')
MEM_TOTAL=$(free -h | awk 'NR == 2 { print $2 }')
MEM_USAGE=$(free -h | awk 'NR == 2 { print $3 }')
MEM_FREE=$(free -h | awk 'NR == 2 { print $4 }')

{
echo "==== Pi 5 System Summary ====="
echo "$TIMESTAMP"
echo "IP ADDRESS: $IP"
echo "HOSTNAME: $HOSTNAME"
echo "UPTIME: $UPTIME"
echo "DISK TOTAL: $DISK_TOTAL"
echo "DISK USAGE: $DISK_USAGE%"
echo "DISK FREE: $DISK_FREE"
echo "MEM TOTAL: $MEM_TOTAL"
echo "MEM USAGE: $MEM_USAGE"
echo "MEM FREE: $MEM_FREE"
} | tee -a "$LOGFILE"
```

Sample Output

```
zippyb@PI-DT-01:~ $ ./pi5-system-summary.sh
==== Pi 5 System Summary =====
2025-05-26 07:46:04
IP ADDRESS: 192.168.1.174
HOSTNAME: PI-DT-01
UPTIME: up 1 week, 4 days, 13 hours, 49 minutes
DISK TOTAL: 229G
DISK USAGE: 6%
DISK FREE: 206G
MEM TOTAL: 7.9Gi
MEM USAGE: 2.4Gi
MEM FREE: 2.3Gi
```

Log Output with `tee` and wrapped in `{}`



```
zippyb@PI-DT-01: ~
File Edit Tabs Help
GNU nano 7.2 pi5-system-summary.sh
DISK_USAGE=$(df -h / | awk 'NR > 1 { print $5 }' | tr -d '%')
DISK_FREE=$(df -h / | awk 'NR > 1 { print $4 }')
MEM_TOTAL=$(free -h | awk 'NR == 2 { print $2 }')
MEM_USEAGE=$(free -h | awk 'NR == 2 { print $3 }')
MEM_FREE=$(free -h | awk 'NR == 2 { print $4 }')

{
echo "==== Pi 5 System Summary ====="
echo "$TIMESTAMP"
echo "IP ADDRESS: $IP"
echo "HOSTNAME: $HOSTNAME"
echo "UPTIME: $UPTIME"
echo "DISK TOTAL: $DISK_TOTAL"
echo "DISK USAGE: $DISK_USAGE%"
echo "DISK FREE: $DISK_FREE"
echo "MEM TOTAL: $MEM_TOTAL"
echo "MEM USAGE: $MEM_USEAGE"
echo "MEM FREE: $MEM_FREE"
} | tee -a "$LOGFILE"

^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Justify    ^_ Go To Line
```

Revision #2

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