Server Performance Stats

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Date: 13-09-2025

❖ Overview

This project contains a shell script (server-stats.sh) that analyzes basic server performance statistics on a Linux system.

❖ Features Implemented

1. CPU Usage – Shows total CPU usage percentage.

2. Memory Usage – Displays used vs free memory with percentage.

3. Disk Usage – Displays used vs free disk space with percentage.

4. Top 5 CPU Processes – Lists top 5 processes by CPU usage.

5. Top 5 Memory Processes – Lists top 5 processes by memory usage.

6. Extra Details –
   Additionally, the script includes extra details such as:
- OS version
- System uptime
- Load average
- Logged-in users
- Failed login attempts

❖ How to Run

1. Save the script file:
   server-stats.sh

2. Make it executable:
   chmod +x server-stats.sh

3. Run the script:
   ./server-stats.sh

❖ Server Performance Script – server-stats.sh

```
#!/bin/bash
# server-stats.sh
# Script to check basic server performance stats
# Created by: SK SAKIL ALI
# Date: 13-09-2025
```

```
Echo "===================================="
Echo "       SERVER PERFORMANCE STATS       "
Echo "===================================="

# 1. CPU Usage
Echo ""
Echo "1. CPU Usage:"
If command -v mpstat >/dev/null 2>&1; then
   Cpu_usage=$(mpstat 1 1 | awk '/Average/ {print 100 - $NF}')
Else
   Cpu_usage=$(top -bn1 | grep "Cpu(s)" | awk -F'id,' '{print 100 - $1}' | awk '{print $NF}')
Fi
Echo "   Usage: ${cpu_usage}%"

# 2. Memory Usage
Echo ""
Echo "2. Memory Usage:"
Free -m | awk '/Mem:/ { used=$3-$6-$7; free=$4+$6+$7; printf "   Used: %s MB | Free: %s MB |
Usage: %.1f%%\n", used, free, used/$2*100 }'

# 3. Disk Usage
Echo ""
Echo "3. Disk Usage (Total):"
Df -h –total | awk '/total/ { printf "   Used: %s | Free: %s | Usage: %s\n", $3, $4, $5 }'

# 4. Top 5 Processes by CPU
Echo ""
Echo "4. Top 5 Processes by CPU:"
Ps -eo pid,comm,%cpu –sort=-%cpu | head -n 6 | tail -n 5

# 5. Top 5 Processes by Memory
Echo ""
Echo "5. Top 5 Processes by Memory:"
Ps -eo pid,comm,%mem –sort=-%mem | head -n 6 | tail -n 5

# ===== Extra Info =====
Echo ""
Echo "===== Extra Info ====="

# OS Version
Echo ""
Echo "OS Version:"
If [ -f /etc/os-release ]; then
   Grep PRETTY_NAME /etc/os-release | cut -d= -f2- | tr -d '"'
Else
   Uname -a
Fi

# Uptime
Echo ""
Echo "Uptime:"
Uptime -p 2>/dev/null || uptime | sed 's/.*up //; s/,.*//'

# Load Average
Echo ""
Echo "Load Average:"
Uptime | awk -F'load average:' '{print $2}' | sed 's/^ *//'
```

```
# Logged-in Users
Echo ""
Echo "Logged-in Users:"
Who | wc -l

# Failed Login Attempts
Echo ""
Echo "Failed Login Attempts:"
If [ -f /var/log/auth.log ]; then
    Grep -c "Failed password" /var/log/auth.log 2>/dev/null || echo "  Permission denied (needs
root)"
Elif [ -f /var/log/secure ]; then
    Grep -c "Failed password" /var/log/secure 2>/dev/null || echo "  Permission denied (needs
root)"
Else
    Echo "  Log file not found"
Fi

Echo ""
Echo "===================================="
Echo "          END OF REPORT"
Echo "===================================="
```

❖ Sample Output (example)

```
====================================
        SERVER PERFORMANCE STATS
====================================

1. CPU Usage:
   Usage: 12.5%

2. Memory Usage:
   Used: 2789 MB | Free: 10234 MB | Usage: 21.4%

3. Disk Usage (Total):
   Used: 98G | Free: 352G | Usage: 22%

4. Top 5 Processes by CPU:
   1223   chrome      24.3
   1456   gnome-shell  7.8
   1678   code        5.4
   1801   firefox     3.2
   2003   bash        1.1

5. Top 5 Processes by Memory:
   1223   chrome      12.6
   1678   code        9.4
   1801   firefox     8.3
   1456   gnome-shell  6.9
   2200   mysql       4.2

===== Extra Info =====
```

OS Version:
Ubuntu 22.04.4 LTS

Uptime:
up 3 hours, 25 minutes

Load Average:
0.45, 0.62, 0.71

Logged-in Users:
1

Failed Login Attempts:
   Log file not found

```
======================================
              END OF REPORT
======================================
```

❖ Conclusion

The server-stats.sh script successfully collects and reports key server performance statistics, including CPU usage, memory usage, disk usage, and top processes. It is lightweight, portable, and designed to work on most Linux environments without requiring additional dependencies. This makes it a reliable tool for basic server monitoring and performance analysis.