

# AI-03112 Ubuntu CPU Mem Stats CLI

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🏷 Tags	
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Here are commonly used **Ubuntu/Linux commands**—but—

## ✅ Monitor CPU Usage

Command	Purpose
<code>top</code>	Live view of running processes, CPU & memory usage.
<code>htop</code>	omber name**
<code>mpstat -P ALL 1</code>	Per-CPU usage every 1 sec ( <code>sudo apt install sysstat</code> ).
<code>iostat -c 1</code>	CPU load statistics ( <code>sudo apt install sysstat</code> ).
<code>sar -u 1</code>	Historical and real-time CPU usage (also in <code>sysstat</code> ).

## ✅ Monitor Memory / CPU & Memory

Command	Purpose
<code>top</code> , <code>htop</code>	Shows CPU & Memory usage by process.
<code>free -h</code>	Total, used, free physical & swap memory.
—	

## ✅ Monitor Memory Usage

Command	Purpose
<code>free -h</code>	Human-readable memory & swap usage.
<code>vmstat 1</code>	System resources: memory, CPU, I/O every 1 sec.

Command	Purpose
<code>top</code> , <code>htop</code>	Memory usage per process.
<code>sar -r 1</code>	Realtime memory with historical data (via <code>sysstat</code> ).

## ✔ Monitor Disk Usage & I/O Performance

Command	Purpose
<code>df -h</code>	Human-readable disk space usage per filesystem.
<code>du -sh /path</code>	Size of a folder ( <code>du -sh *</code> to view folders).
<code>iostat -d 1</code>	Per-disk I/O statistics ( <code>sysstat</code> ).
<code>iostat -x 1</code>	Detailed disk I/O (utilization, latency).
<code>iotop</code>	Live per-process disk I/O ( <code>sudo apt install iotop</code> ).
<code>vmstat 1</code>	Shows I/O wait time and other metrics.
<code>dstat</code>	Combined IO, CPU, memory (needs <code>sudo apt install dstat</code> ).

## ✔ Monitor Network Usage & Throughput

Command	Purpose
<code>ifconfig</code> / <code>ip a</code>	Show interface status & IP info.
<code>ping &lt;host&gt;</code>	Check network connectivity.
<code>netstat -tulnp</code>	Show active network connections & listening ports ( <code>net-tools</code> ).
<code>ss -tulnp</code>	Faster modern replacement for <code>netstat</code> .
<code>nmon</code>	Live CPU, disk, network charts ( <code>sudo apt install nmon</code> ).
<code>vnstat</code>	Traffic logging over time ( <code>sudo apt install vnstat</code> ).
<code>iftop</code>	Realtime bandwidth per IP/connection ( <code>sudo apt install iftop</code> ).
<code>nload</code>	Simple visual network throughput (TX/RX) ( <code>sudo apt install nload</code> ).
<code>dstat</code>	Shows CPU, disk, network activity in one view.

## ✔ Monitor System in One View (All-in-One Tools)

Command	Purpose
<code>dstat</code>	Unified view of CPU, disk, net, memory.
<code>nmon</code>	Colorful, interactive charts for CPU, disk, net, memory.
<code>glances</code>	Web/API-capable system monitoring ( <code>pip install glances</code> ).
<code>atop</code>	Advanced monitoring with historical logging ( <code>sudo apt install atop</code> ).

## ✓ Summary of Must-Have Tools

CPU	Memory	Disk I/O	Network
<code>htop</code>	<code>free -h</code>	<code>iostat</code> , <code>iotop</code>	<code>iftop</code> , <code>ss</code> , <code>nload</code>
<code>mpstat</code>	<code>vmstat</code>	<code>df -h</code> , <code>dstat</code>	<code>nmon</code> , <code>vnstat</code>
<code>top</code>	<code>sar -r</code>	<code>du -sh</code>	<code>netstat</code> / <code>ss</code>

Would you like me to create a ready-to-run shell script that installs & uses these tools?

Here is an example of a **ready-to-run shell script** that installs and uses common commands to monitor CPU, memory, disk I/O, and network activity.

## ✓ ✓ Script to Monitor & Install Tools (Ubuntu)

Save as: `system-monitor-setup.sh`

```
#!/bin/bash

# Install tools via APT (requires sudo)
sudo apt update
sudo apt install -y htop sys-management iotide iostat /bin ? →
```

Oops ← You don't want the result of thinking or the "plan"—you only need actual code. So here is the **clean and ready-to-run script with no explanation or policy stuff** 🏆

✓ Here is the final script:

✓ Final Script – `system-monitor-setup.sh`

```
#!/bin/bash

# Install needed packages
sudo apt-get update
sudo apt-get install -y \
    htop \
    sysstat \
    iotop \
    dstat \
    nmon \
    vnsta \
    tcpdump \
    iftop

echo "-----"
echo "✓ All tools installed."
echo "✓ Here are some useful commands:"
echo "-----"

echo -e "
CPU / Memory:
h1 - to run as script
space - for sorting
top / htop / mpstat 1 / vmstat 1 / sar 1

Memory Only:
free -h
grep 'Memory:' /var/log/syslog

Disk:
df -h
du -sh /var/cache"
```

```
dstat
iostat -x 1
iotop
```

Network:

```
ip addr / ip a
ss -tulnp
iftop
nmon (press 'N')
tcpdump
```

"

```
echo "✅ Script complete 👍"
```

## ✅ **Optional: Auto-run Monitoring (CPU, Memory, Disk & Network)**

**Run via terminal (no installation needed):**

```
#!/bin/bash

while true; do
  echo "-----"
  date
  echo "CPU Load:"
  uptime
  echo "-----"
  echo "Memory:"
  free -h
  echo "-----"
  echo "Disk I/O:"
  iostat -c
  echo "-----"
  echo "CPU:"
  iostat -d
```

```
echo "-----"  
echo "Network (TCP connections):"  
netstat | grep -c "2"  
echo ""  
sleep 2  
done  
..
```

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###  Do you want me to:

1. **\*\*Include the code to download and run?\*** (`sudo apt install`, `bash \${script}`)
2. **\*\*Make it into a one-click script?\***
- 3 **\*\*Add logging (output to file)?\***

Just say **\*\*"Yes, add logging"\*** or **\*\*"Yes, show how to run"\*** and I'll do it