

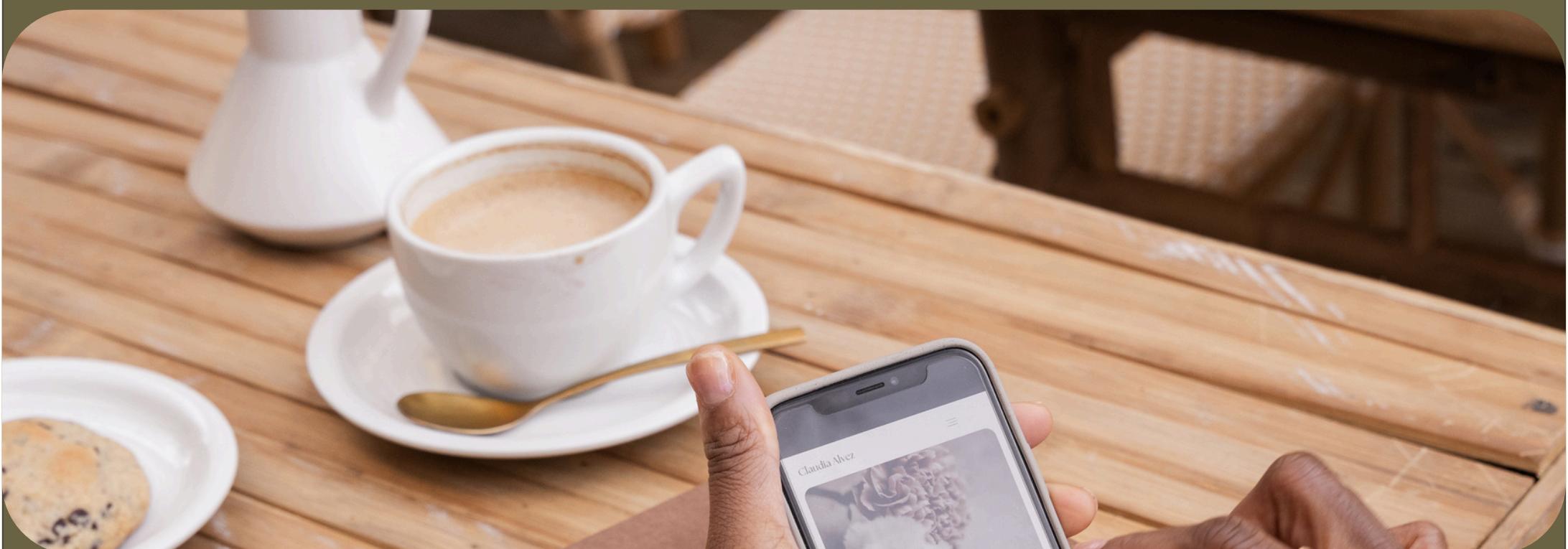
LINUX NETWORKING COMMANDS SIMPLIFIED

Confused between ifconfig, iwconfig, hipconfig, iconfig?
Here's a simple breakdown





When I started exploring Linux, I was confused by commands like ifconfig, iwconfig, hipconfig, and iconfig. They all look similar, but actually belong to different toolkits and serve very different purposes.



PACKAGE: NET-TOOLS

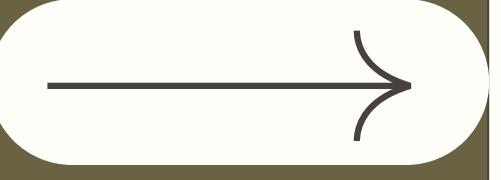


◆ What is net-tools?

- net-tools is an old collection of networking commands in Linux.
- It contains commands like:
 - ifconfig → show/set IP addresses
 - netstat → show network connections
 - route → show/change routing table

• It was the default toolkit in Linux many years ago.
But... it is deprecated now (not updated anymore).

Modern Linux systems replaced it with iproute2 package (newer commands).



DIFFERENT COMMANDS:

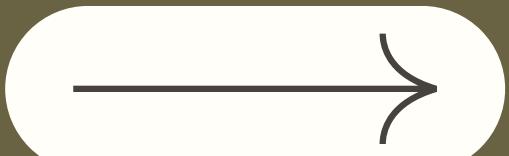


1. ifconfig

- Package: net-tools (old package, now deprecated). See the below notes first to know about the net-tools.
 - Purpose: Shows and configures network interfaces.
 - Use: ifconfig
- Displays IP address, MAC address, MTU, etc.
- 📌 Example output:
- ```
eth0: inet 192.168.1.10 netmask 255.255.255.0 broadcast
192.168.1.255
```

## 2. iwconfig

- Package: wireless-tools.
  - Purpose: Manages wireless network interfaces (Wi-Fi).
  - Use: iwconfig
- Shows wireless SSID, frequency, signal strength, but not IP.
- Works like ifconfig but only for Wi-Fi adapters.



# DIFFERENT COMMANDS:



## 3. **hipconfig**

- Package: hipcc (Host Identity Protocol implementation).
- Purpose: Related to Host Identity Protocol (HIP) networking, not normal IP configuration.
- Rarely used unless you're experimenting with HIP.

## 4. **iconfig**

- Package: ipmiutil.
- Purpose: Used for IPMI (Intelligent Platform Management Interface), usually on servers for remote hardware management.
- Not related to normal Linux IP address display.

 Modern replacement for ifconfig:

**ip addr show** or simply **ip a**

This comes from the iproute2 package, which is the standard toolset now.

👉 So, only ifconfig (old) and ip addr show (new) are for normal IP address management.

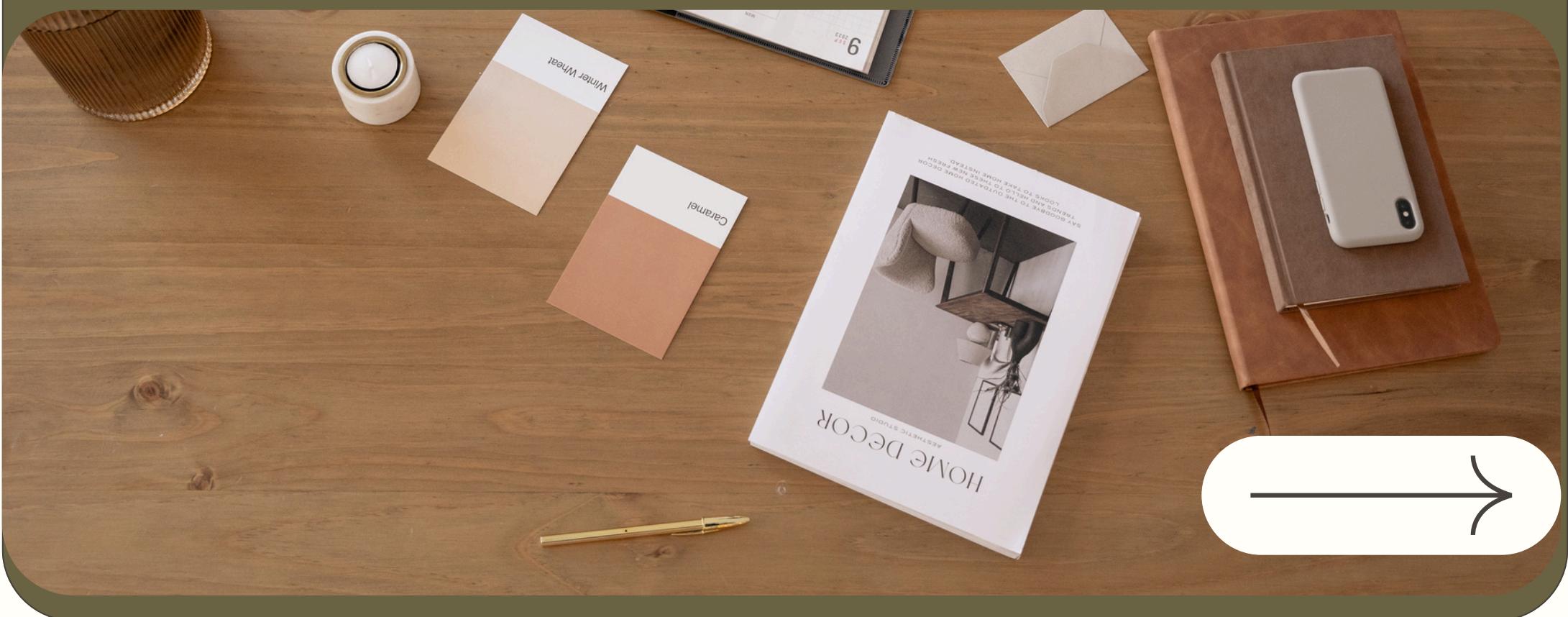
The others (iwconfig, hipconfig, iconfig) serve different, specialized purposes.



# CASE STUDIES



- 1) A junior admin tried ifconfig on Ubuntu 22.04 but got “command not found.” He learned that net-tools was deprecated and the modern replacement is ip a from the iproute2 package.
- 2) A student’s laptop wasn’t connecting to Wi-Fi. Using iwconfig, they discovered the Wi-Fi adapter was down, not the internet itself. Enabling the adapter fixed the issue.
- 3) An engineer remotely managed a server’s hardware using iconfig (from ipmiutil). It had nothing to do with Linux IP addresses – showing why knowing the difference between tools matters.



# CHEAT SHEET



| Command   | Package                   | Purpose                                                                                      | Example Use          |
|-----------|---------------------------|----------------------------------------------------------------------------------------------|----------------------|
| ifconfig  | net-tools<br>(deprecated) | View & configure all network interfaces (Ethernet, Wi-Fi, etc.). Shows IP address, MAC, MTU. | ifconfig eth0        |
| iwconfig  | wireless-tools            | Manage wireless interfaces (SSID, frequency, signal strength). Does not show IP.             | iwconfig wlan0       |
| hipconfig | hipcc                     | Configure Host Identity Protocol (HIP) networking. Rarely used in normal Linux networking.   | hipconfig get ha all |
| iconfig   | ipmiutil                  | Configure IPMI (server remote management interface). Not related to Linux system IP.         | iconfig -N           |



# THANK YOU....!!

**Thank you for being part of my learning journey. More knowledge-sharing posts coming soon!**

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