Wi-Fi troubleshooting checklist

Work from the device outwards. Change one thing at a time and test again, so you know what actually fixed it.

1. Scope the problem

- One device or everyone? One room or the whole building?
- Wi-Fi only, or wired users too? (Wired also bad = internet / router.)
- Since when? Anything changed: new router, update, furniture, neighbour?
- Slow, dropping, or cannot connect at all?

2. Device checks

- Toggle Wi-Fi off/on; restart the device.
- Forget the network and rejoin (fixes old passwords and settings).
- Check for a valid IP: not `169.254.x.x` (= no DHCP).
- Update the OS and Wi-Fi driver.
- Turn off VPN or "private relay" while testing.

3. Signal and band

Check	Good sign
Signal (RSSI)	Better than −67 dBm for calls and video; −75 dBm or worse is weak
2.4 GHz	Longer range, slower, crowded; use channels 1, 6 or 11 only
5 GHz	Faster, more channels, shorter range through walls
6 GHz (Wi-Fi 6E/7)	Fastest and cleanest, shortest range
Router placement	Central, high, in the open; away from microwaves and metal

4. Network checks

- Too many devices or one device hogging bandwidth (backups, updates, streaming)?
- Restart the router / access point; check its firmware is current.
- Look at the channel use: switch to a less busy channel.
- Mesh or extender: place it where the signal is still good, not in the dead zone.
- DHCP pool full? Increase it or shorten the lease time.
- Use WPA3 or WPA2-AES; avoid WEP/TKIP (also slow).

5. Prove where the fault is

Command	What it does
`ping 192.168.1.1 -t`	Ping the router: drops here = Wi-Fi/local problem
`ping 8.8.8.8`	Router fine but this fails = internet/ISP problem
`nslookup fmtechub.com`	IP works but names fail = DNS problem
`netsh wlan show interfaces`	Windows: signal %, channel, band, speed
`netsh wlan show wlanreport`	Windows: report of recent disconnects (admin)
`iw dev wlan0 link / nmcli dev wifi`	Linux: signal and nearby networks
`Hold Option + click Wi-Fi icon`	macOS: RSSI, noise, channel

6. Office extras

- Check the controller / cloud dashboard for client health, retries and interference.
- Look for roaming problems: clients stuck on a far access point.
- Check PoE budget and uplink of the access point.
- 802.1X/RADIUS errors if users cannot authenticate.
- Do a site survey for new areas or layout changes.

7. Fix, test, record

> Write down what you found, what you changed and the result. A two-line note saves the next person an hour.

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