How Do I Fix the Mobile Network State Disconnected Issue on My Android Phone?

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Quick answer

The "Mobile Network State: Disconnected" error on Android indicates your phone's modem has lost data channel registration with your carrier's network, even though you may still see signal bars or be able to make calls-this is typically a software or configuration issue rather than hardware failure. The fix usually involves resetting network settings, correcting the preferred network type (especially after OS updates), verifying or resetting APN settings, or addressing carrier-side provisioning problems with VoLTE/5G services, with most cases resolved through simple steps like airplane mode cycling, SIM reseating, or network settings reset before requiring carrier support or SIM replacement.

Key points

- "Disconnected" means the data layer registration failed specifically-voice and SMS may still work because Android tracks these as separate channels
- Most common causes: wrong preferred network type setting (especially after updates), corrupted/missing APN settings, SIM not provisioned for VoLTE or 5G, and carrier configuration profile not loaded
- Quick fixes to try first: full phone restart with SIM reseat, 30-second airplane mode cycle, and disabling Wi-Fi to test mobile data independently
- Check preferred network type setting-ensure it's set to auto or includes LTE/4G; setting "2G only" or "5G only" on incompatible SIMs causes disconnection
- Reset APN settings via Settings -> Mobile Networks -> Access Point Names -> Reset to Default, then restart the phone
- Use hidden diagnostic menu (*#*#4636#*#*) to check Mobile Radio Power, Data Service status, and IMS Registration state
- Network settings reset clears all carrier profiles and configurations without touching personal data-one of the most effective mid-level fixes
- Carrier-side provisioning issues are increasingly common (2025-2026) with VoLTE mandates and 5G rollouts; may require carrier to push VoLTE profile update or provision account correctly
- eSIM-specific fix: delete the eSIM profile completely and re-download from carrier to force fresh provisioning negotiation
- Contact carrier when: issue appeared after number porting, second SIM also shows disconnected, IMS shows "Not registered" after all fixes, or SIM is 3+ years old on networks with new VoLTE/5G services
- Intermittent disconnection that returns repeatedly usually indicates carrier provisioning problem, outdated baseband firmware, or VPN/network app interference
- Hardware failure is rare but indicated by: permanent disconnection with any SIM, signal reading -113 dBm or 0 dBm, or phone not detecting SIM card at all

You open Settings -> About Phone -> Status -> SIM card status on your Android, and there it is: Mobile Network State: Disconnected. Or maybe you dialed ‘*#*#4636#*#*‘ while chasing down a mobile data problem and spotted it in the Phone Information screen. Either way, you now have a specific error to work with - and that is actually good news, because "Disconnected" is not random noise. It means your phone’s radio module has lost its registration with the carrier’s network at the data channel level. It is not just weak signal. It is a broken handshake between your SIM, your phone’s modem, and your operator’s core network.

The frustrating part is that this error does not always come with visible symptoms. You might still see signal bars. You might still receive SMS. Calls may work fine while mobile data stays dead - or the reverse. That is because Android tracks voice, SMS, and data registration as separate channels, and any one of them can fail independently. What the "Disconnected" status is telling you is specifically that the data layer has dropped, or that the device could not complete its full registration sequence with the carrier at all. The fix depends entirely on which layer broke and why.

Nine times out of ten, this is a software or configuration issue - not a hardware failure. The modem on modern Android phones is remarkably stable. When it shows Disconnected, something in the stack above it - the APN profile, the carrier configuration, the preferred network type setting, or the SIM’s provisioning state - has gone wrong. A small number of cases point to a genuinely damaged SIM or a carrier-side provisioning failure that requires a support call. The steps below are ordered from fastest and most effective to deepest, so work through them in sequence rather than jumping to a factory reset on day one.

What "Mobile Network State: Disconnected" Actually Means

On Android, the mobile network connection involves three distinct layers working together: the physical radio (baseband modem), the SIM card carrying your subscriber identity, and the carrier profile that tells the modem which bands, APNs, and services to use. When everything works, the modem completes a process called network registration - it attaches to the carrier’s RAN (Radio Access Network), authenticates the SIM, and negotiates a data bearer. The status field in Android’s SIM status screen reflects whether that final registration was completed or not.

"Disconnected" means it was not. The modem may be powered on, the SIM may be physically present and readable, signal may even be showing on the status bar - but the carrier rejected or ignored the registration request, or the phone-side configuration was wrong enough that it never fully initiated one. This is distinct from "Out of Service," which usually means no signal or the radio is off entirely. You can confirm the difference by checking the Service State line in the same SIM status screen. If Service State says "In Service" but Mobile Network State says "Disconnected," the problem is almost always APN or provisioning related. If both say Disconnected or Out of Service together, the problem is deeper - either no signal, an inactive SIM, or a modem issue.

Common Causes - Ranked by Real-World Frequency

Before diving into fixes, it helps to know what you are most likely dealing with. The table below is based on patterns observed across Samsung Galaxy, Google Pixel, Xiaomi, and OnePlus devices, and accounts for the shift in 2024-2026 where VoLTE provisioning and eSIM activation failures have become more common causes than the older "3G SIM on 4G phone" mismatch.

Cause: Wrong preferred network type setting | Typical Symptom Pattern: Disconnected after OS update or SIM swap; data dead but voice OK | Affected Devices: All Android phones | How Often It’s the Culprit: Very common

Cause: Corrupted or missing APN settings | Typical Symptom Pattern: No mobile data; SIM registers but no data bearer assigned | Affected Devices: All Android phones, especially after factory reset | How Often It’s the Culprit: Very common

Cause: SIM not provisioned for VoLTE or 5G services | Typical Symptom Pattern: Calls fail or drop; data works but IMS shows "Not registered" | Affected Devices: Phones on Jio, T-Mobile, Verizon, major 4G-first carriers | How Often It’s the Culprit: Common (increasing in 2025-2026)

Cause: Carrier configuration profile not loaded | Typical Symptom Pattern: Disconnected immediately after new SIM or device swap | Affected Devices: Samsung, Pixel, Sony after SIM insertion | How Often It’s the Culprit: Common

Cause: VPN or firewall app interfering with mobile stack | Typical Symptom Pattern: Disconnected only when VPN is active; clears on VPN disable | Affected Devices: Any Android with a VPN app installed | How Often It’s the Culprit: Moderately common

Cause: SIM card not seated correctly or contacts dirty | Typical Symptom Pattern: Intermittent Disconnected; signal appears and disappears | Affected Devices: Devices with physical SIM trays | How Often It’s the Culprit: Moderately common

Cause: eSIM profile issue after device reset or region mismatch | Typical Symptom Pattern: Disconnected immediately after eSIM activation; no data at all | Affected Devices: Pixel 6 and later, Samsung S21+, imported phones | How Often It’s the Culprit: Growing in frequency

Cause: Outdated baseband firmware with modem registration bug | Typical Symptom Pattern: Disconnected randomly, clears after reboot, returns on its own | Affected Devices: Specific affected models (varies by OEM patch cycle) | How Often It’s the Culprit: Less common but hard to diagnose

Cause: SIM-locked phone used on incompatible carrier | Typical Symptom Pattern: Disconnected permanently; no registration at all | Affected Devices: Carrier-sold or imported phones | How Often It’s the Culprit: Less common

Cause: Physical damage to SIM card or antenna | Typical Symptom Pattern: Disconnected permanently; SIM not detected or intermittent | Affected Devices: Any device after drop or water exposure | How Often It’s the Culprit: Rare but irreversible without repair

Data last verified: April 2026

Quick Fixes That Resolve Most Cases

Start here before changing any settings. These three steps clear the majority of temporary registration failures with almost no effort, and they take under three minutes combined.

Restart the Phone and Reseat the SIM

A full power cycle - not just a screen lock or sleep - forces the modem to reinitialize from scratch. When the phone boots, it goes through the full SIM authentication and network registration sequence fresh. Power it off completely, wait 20 seconds, then power back on. If the issue persists, power off again, eject the SIM tray, inspect the gold contacts on the card for dust or corrosion, and reseat it firmly before restarting. A SIM that is 0.5mm off-center in its tray is enough to cause intermittent or permanent disconnection.

Airplane Mode Cycle

Enabling Airplane Mode forces the radio stack to shut down all RF transmissions. Disabling it after 30 seconds triggers a fresh network scan and registration attempt. This is faster than a full reboot and often clears the Disconnected state when the modem has gotten into a stuck registration loop. Pull down the notification shade, tap the Airplane icon, wait 30 seconds minimum - not 5 - then tap it off and give the phone another 60 seconds to re-register before concluding it did not work.

Disable Wi-Fi Before Testing Mobile Data

Most Android phones prioritize Wi-Fi for data when both connections are active, which can mask a Disconnected mobile network state. Turn Wi-Fi off entirely, then check if mobile data works. This is not a fix - it is a diagnostic step. If data works with Wi-Fi off, your mobile network state was actually connecting fine and the symptom was a Wi-Fi routing issue. If it still shows Disconnected with Wi-Fi off, you have a genuine mobile registration problem and need to continue below.

Check and Correct the Preferred Network Type

This is the single most common configuration-level cause, and it is easy to miss because the setting does not reset itself to something visibly wrong - it usually just ends up one step off from what the carrier requires. Go to Settings -> Connections (or Network & Internet) -> Mobile Networks -> Network Mode. What you want to see is an option that includes 4G or LTE - ideally "LTE/3G/2G (auto connect)" or "5G/LTE/3G/2G" depending on your plan and region.

If the mode is set to 2G only or 3G only and your SIM is a 4G-provisioned card, the phone will attempt to register on a network type the carrier no longer supports in your area - resulting in a clean Disconnected state. Conversely, some older SIM cards issued before 2021 are not provisioned for 5G SA (Standalone) networks, and selecting "5G Only" on a network that requires SA capability can cause the same result. Set it to auto and let the modem negotiate. On Samsung devices running Android 14 and later, this setting is under Settings -> Connections -> Mobile Networks -> Network Mode. On Pixel phones with Android 13 or later, it is under Settings -> Network & internet -> SIMs -> [your SIM] -> Preferred network type.

If you want to dig deeper than the settings menu allows, dial ‘*#*#4636#*#*‘ from the phone app. This opens the hidden Phone Information screen. Look at three fields: Mobile Radio Power (must be ON), Data Service (should say "Connected" when working), and Network Type (should show LTE, HSPA+, NR, or similar - not "Unknown"). If Mobile Radio Power is ON but Data Service shows Disconnected, the issue is above the modem layer - APN or provisioning. If you see "Turn Off Radio" and "Turn On Radio" buttons, use them in sequence to re-initialize the modem stack without rebooting - this occasionally clears stuck registration states that a simple restart does not.

Reset the APN Settings

The APN (Access Point Name) is the gateway configuration that tells your modem which data channel to use for internet access, MMS, and carrier services. If these settings are wrong, empty, or have been modified by a third-party app or a failed OTA update, the modem will authenticate with the carrier but never successfully open a data bearer - which shows up exactly as "Mobile Network State: Disconnected" in the status screen.

To reset: go to Settings -> Connections -> Mobile Networks -> Access Point Names. Tap the three-dot menu in the top-right corner and choose Reset to Default. On stock Android (Pixel devices), the path is Settings -> Network & internet -> SIMs -> [SIM name] -> Access Point Names -> three-dot menu -> Reset to defaults. Restart the phone after the reset. In most cases, your carrier’s APN profile will load automatically from the SIM. If it does not - for example, if you are using an MVNO (a virtual operator running on a host network) like Airtel MVNO, BSNL on Jio infrastructure, or similar - you may need to manually enter the APN values. Get these directly from your carrier’s website or customer support, not from third-party APN lists online, which are frequently outdated. If you are unsure how your SIM card is set up for data services, the guide on Android data roaming settings covers the related network settings menu in detail.

Reset Network Settings

If APN reset alone did not fix it, the next step is a full network settings reset. This clears saved carrier profiles, mobile network preferences, preferred network type, paired Bluetooth devices, and Wi-Fi passwords - but it does not touch your apps, photos, or other data. It is one of the most effective mid-level fixes because it wipes out any partial or corrupt configuration that the simpler steps above could not remove.

On Samsung devices: Settings -> General Management -> Reset -> Reset Network Settings. On Pixel and stock Android: Settings -> System -> Reset Options -> Reset Wi-Fi, mobile & Bluetooth. After the reset, let the phone sit for two to three minutes with the SIM inserted before drawing conclusions - network registration can take that long to complete when rebuilding from a clean state. Reconfigure your Wi-Fi passwords and check the mobile network state again before moving to the next step. Google documents the full scope of what this reset affects in its Android mobile connectivity help for those who want to know exactly what gets cleared.

When the Problem Is Carrier-Side Provisioning

This category catches more cases than most guides acknowledge, especially in 2025 and 2026 as carriers push forward with VoLTE mandates and 5G rollouts. If you recently ported your number, switched from a physical SIM to an eSIM, received a replacement SIM, or activated a brand-new line, the Disconnected state may have nothing to do with your phone’s settings at all.

SIM Provisioning and IMS Registration

Modern carriers provision specific services - VoLTE, Wi-Fi Calling, 5G data - at the account level. If your SIM is not provisioned for VoLTE on a network where 3G has been sunset (Jio shut down its 3G WCDMA network in 2016, and Airtel completed its 3G exit in 2024 across most Indian circles), calls will fail even when data works. Check the IMS registration status by going to ‘*#*#4636#*#*‘ -> Phone Information -> scroll to IMS Registration. If it shows "Not registered," contact your carrier and specifically request a "provisioning push" or "VoLTE profile update" for your account - not a general troubleshooting call. This is a backend operation carriers can perform remotely, and it often resolves IMS-related disconnection within minutes. A related issue - SIM card registration failure - is covered separately in the SIM registration failure guide if you are seeing that specific error alongside this one.

eSIM-Specific Cases

With eSIMs, there is no physical card to reseat, which removes one of the most reliable first steps. When an eSIM shows Disconnected, the most effective fix is to delete the eSIM profile entirely and re-download it from the carrier. On Android, go to Settings -> Network & internet -> SIMs -> [eSIM name] -> Delete, then re-activate via your carrier’s app or QR code. This forces a completely fresh negotiation with the carrier’s provisioning server. If the eSIM was activated in a different region - common with imported phones or international carrier profiles - some carriers will silently refuse to register the device for data, which appears as a permanent Disconnected state. In that case, the phone may be functioning correctly, but the carrier’s system is blocking registration. Checking whether your phone’s IMEI is SIM-locked to another carrier is worth doing before assuming the eSIM profile itself is corrupted.

Carrier Outages

A carrier outage in your area can present identically to a local configuration problem - the Mobile Network State will show Disconnected, bars may drop, and no combination of settings changes will fix it. Check your carrier's status page or a third-party outage tracker (Downdetector, for instance) before spending more than a few minutes troubleshooting. If a tower in your area is down, a network settings reset will not help. Wait it out.

Firmware Updates and the Modem Bug Factor

Android's modem firmware is updated as part of system updates, and real modem bugs that cause registration failures have appeared in Pixel 6 (baseband version G5123B), Samsung Galaxy S22 (Android 14 rollout in late 2023), and select Xiaomi MIUI builds. Google publishes monthly Android security bulletins that include baseband patches - checking Android's security bulletin history can tell you whether your device's patch level includes known modem fixes. If you have not updated in three or more months and you are on an affected device, updating is worth trying before any deeper troubleshooting.

For devices running custom ROMs or with modified modem firmware, the troubleshooting logic is different. APN loading, IMS registration, and carrier bundle handling can all break after flashing a custom modem, even when the ROM itself is stable. Revert any modem changes before assuming the carrier is at fault. If you recently changed your default SIM configuration on a dual-SIM device and the issue appeared after that - particularly if calls now fail on one SIM - the default SIM selection guide walks through how to correctly configure SIM preferences for calls, SMS, and data without creating conflicts between slots.

When to Contact Your Carrier or Replace the SIM

There is a point where further phone-side troubleshooting stops being useful. Contact your carrier directly when:

- The Disconnected state appeared immediately after porting your number or switching SIMs, and all the steps above have been completed
- A second SIM tested in the same slot also shows Disconnected (rules out the phone's hardware)
- The IMS registration check in '*#*#4636#*#*' shows "Not registered" even after a network settings reset and restart
- Your SIM is more than three years old and the carrier has since rolled out VoLTE or 5G services in your area (old SIM cards sometimes lack the capacity for modern provisioning)
- The carrier's support team confirms no backend issue exists on your account - at that point, a replacement SIM issued to the same number almost always resolves it

If you have tested with a known-good SIM from a different carrier, completed all software-level fixes, and the Disconnected state persists regardless of which SIM is inserted, the problem has moved into modem hardware territory - and that means a service center visit. Signals of this include: signal strength reading as -113 dBm or showing 0 dBm in the diagnostic menu, service state permanently stuck at "Out of Service," and the phone not detecting any SIM card in settings even when one is correctly inserted. The Samsung Community forums have a Samsung mobile data thread covering hardware-related cases on Galaxy S series devices if you want to see how others diagnosed the same pattern.

If It Keeps Coming Back

An intermittent Disconnected state that returns after every reboot, or clears and reappears on its own, is almost always tied to a carrier provisioning problem, an outdated baseband, or a background app (usually a VPN or network optimizer) resetting your mobile configuration. Disable all VPNs and network management apps, install any pending system update, and monitor. If it only happens in one physical location, it is likely a weak-signal-related registration timeout rather than a configuration problem - the modem drops registration when signal falls below a usable threshold and does not always recover cleanly when signal returns.

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