



Performance Recovery & Cache Management

Steps for clearing caches and partitions, and managing RAM and logs

Android focus with iOS equivalents · US and EU / UK notes

iOS

Android

US

EU / UK

Inside this protocol

- A recovery ladder: always try the least invasive fix first
- Safe Mode, app cache, and wipe-cache-partition steps, with honest device compatibility
- Factory reset protocol with pre- and post-reset checklists
- Managing RAM, reading memory logs, and capturing bug reports safely
- iPhone equivalents, troubleshooting matrix and privacy notes



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How to use this document

Work down the **recovery ladder in Section 1** and stop as soon as the problem is fixed. Each step is more invasive than the last, and only the final two steps can erase personal data.

Menu names and key combinations differ by manufacturer and software version. Where yours differs, search Settings for the bold name or check the manufacturer's support page for your exact model.

Related Master Matrix entries: ID 2 (Rapid Battery Drain), ID 6 (Extreme Device Sluggishness), ID 14 (App Sandbox Corruption / Bootloops), ID 18 (Storage Full), ID 19 (Frozen Screen), ID 24 (Forgotten Passcode).

Scope and warnings

This guide covers **supported, manufacturer-provided** tools only: Settings, Safe Mode, the stock recovery menu, and standard bug-report tools. It does not cover unlocking the bootloader, rooting, custom recovery images or flashing third-party firmware. Those can void warranties, weaken security and brick the phone.

Back up before any step marked "data risk". A factory reset cannot be undone.



SECTION 1

1 The Recovery Ladder

Most slowdowns come from a handful of causes: a misbehaving app, a nearly full storage drive, or a half-finished update. Climb the ladder one rung at a time and re-test after each step.

Step	Action	What it touches	Data risk	Try it when
0	Restart the phone	Clears RAM and restarts all processes	None	Always first; restart weekly as routine.
1	Force stop and update the suspect app	One app's running processes	None	One app is slow, crashing or draining battery.
2	Clear that app's cache	Temporary files in that app only	None (low)	App is slow or shows stale or corrupt content.
3	Free up storage and install updates	Storage space, OS and app versions	None	Storage above about 85–90% full, or updates pending (see Matrix ID 18).
4	Safe Mode test	Temporarily disables third-party apps	None	Problem across the whole phone; tests whether an app is to blame.
5	Reset network settings, or reset app preferences	Settings only	Low	Connectivity problems, or apps that were disabled or restricted by mistake.
6	Wipe cache partition (where available)	System cache in recovery	None to personal data	After a major update with odd behaviour. Many phones no longer offer it (Section 5).
7	Factory reset	Everything on the phone	High	Persistent problems after steps 0–6, or before sale or repair.
8	Manufacturer service or firmware restore	Firmware and hardware	High	Reset does not help or the phone will not boot. Suggests a hardware or firmware fault.

Why order matters

A factory reset fixes many software problems, but it also costs hours of restoring apps and risks losing data that was never backed up. Steps 0–4 fix the large majority of everyday slowdowns without any risk.



SECTION 2

2 Memory, Storage and Partitions in Plain English

Term	Plain meaning	Safe to clear?
RAM	Short-term working memory. Emptied when the phone restarts.	Yes. A restart clears it.
Storage	Long-term space for apps, photos and the system.	Delete what you do not need.
App cache	Temporary files an app keeps to load faster (thumbnails, downloaded pages).	Yes. The app rebuilds it.
App data / "Clear storage"	An app's saved state: logins, settings, offline files.	No, unless you accept losing it.
System (cache) partition	A reserved area where the OS keeps temporary update and system files on some phones.	Yes, where the option exists. No personal data.
Data (userdata) partition	Your apps, accounts, photos and settings.	No. Wiping it is a factory reset.
System and vendor partitions	The operating system itself.	Never edit. Only updates or service tools change them.
A/B (seamless) update slots	Two copies of the system so updates install in the background.	Not user-clearable.

Why "RAM booster" apps do not help

Android and iOS manage memory themselves and automatically close background apps when space is needed. Task killers and "RAM cleaner" apps force apps to restart, which uses more battery and often makes the phone feel slower. A normal restart, plus restricting problem apps, is the effective approach.

A **cache partition** wipe is a recovery-menu action that clears only the system cache. Many current phones, especially those with seamless updates, no longer have a separate cache partition, so the menu option is absent. That is normal and not a fault.

SECTION 3

3 Android: App Cache and Storage Clean-Up

Task	Path	Notes
Clear one app's cache	Settings > Apps > [app] > Storage & cache > Clear cache (Samsung: Storage > Clear cache)	Do this first. Do not tap Clear storage / Clear data unless you accept losing the app's local data.
Review what fills storage	Settings > Storage (Pixel). Samsung: Settings > Battery and device care > Storage	Check Apps, Images, Videos, Downloads and System.
Free up space	Pixel: Settings > Storage > Free up space, or Files by Google > Clean. Samsung: Device care > Storage > Clean now	Review the suggestions before confirming deletion.
Browser cache	Chrome > Settings > Privacy and security > Delete browsing data	Choose Cached images and files. Skip passwords and autofill unless needed.
Play Store cache	Settings > Apps > Google Play Store > Storage & cache > Clear cache	Fixes stuck downloads and update errors.



Task	Path	Notes
Reset app preferences	Settings > System > Reset options > Reset app preferences	Re-enables disabled apps and resets permission and background defaults. No app data is deleted.
Reset network settings	Settings > System > Reset options > Reset Wi-Fi, mobile & Bluetooth (Samsung: Settings > General management > Reset)	Removes saved Wi-Fi passwords and Bluetooth pairings.

Keep 10–15% of storage free. Very full storage slows installs, camera saves and updates, and can cause crashes that look like memory faults.

SECTION 4

4 Safe Mode Test

Safe Mode starts the phone with only built-in apps. If the problem disappears, a downloaded app is responsible. If it persists, the cause is the system or hardware.

Brand	Enter Safe Mode	Exit
Pixel and stock Android	Hold the Power button, touch and hold Power off , then tap OK to reboot to Safe Mode.	Restart the phone normally.
Samsung Galaxy	Power off. Press and hold Power until the Samsung logo appears, release, then immediately press and hold Volume Down until the phone finishes restarting. "Safe mode" shows at the bottom left.	Restart the phone normally.
Other brands	Usually Power off, then hold Power and Volume Down during start-up. Check the maker's support page.	Restart the phone normally.

- Use the phone normally for 15–30 minutes. If it is smooth, uninstall recently added apps one at a time (Settings > Apps) and test after each.
- Widgets and some accessories are disabled in Safe Mode. That is expected.

SECTION 5

5 Wipe Cache Partition (Recovery Mode)

Check compatibility first. Google removed the wipe-cache-partition option from devices that use seamless (A/B) updates, which includes Pixel phones, so you will not find it there. Samsung Galaxy phones usually still offer it. Other brands vary. Samsung community moderators also note that modern Android manages the system cache effectively, so treat this step as a troubleshooting measure after a major update or when behaviour is odd, not as routine maintenance.

5.1 Entering recovery mode

Device	Steps
Samsung Galaxy (most current models)	Power the phone off. On newer models connect the USB cable to a computer (or USB-C headphones) first. Press and hold Volume Up + Side (Power) until the Samsung logo appears, then release. Some models need you to hold for 8–10 seconds. Older models with a Bixby button use Volume Up + Bixby + Power.
Google Pixel	Power off. Hold Power + Volume Down (Pixel 6 and later) until the bootloader menu appears. Use the volume keys to highlight Recovery mode and press Power. If a "No command" screen appears, hold Power and tap Volume Up once to show the menu. No wipe-cache option is offered.



Device	Steps
Other brands	The combination varies (often Power + Volume Up or Volume Down). Search the manufacturer's support site for your exact model name.

5.2 Clearing the cache

- In the recovery menu, the volume keys move the highlight and the Power or Side key selects.
- Highlight **Wipe cache partition** and press Power. Confirm with **Yes**. Wait for the "cache wipe complete" message.
- The menu returns with **Reboot system now** highlighted. Press Power to restart.
- The first start-up can take longer than usual while the system rebuilds its cache. Allow 5–10 minutes before judging results.

Do not select the wrong option

Directly above or below "Wipe cache partition" sits **Wipe data / factory reset**. Selecting it erases the phone. Read the highlighted line before pressing Power. If the screen text is unclear, choose Reboot system now and try again.

5.3 Recovery menu map

Menu option	What it does	Risk
Reboot system now	Restarts normally.	None
Reboot to bootloader	Opens the low-level boot menu.	None, but avoid other bootloader options.
Apply update from ADB / SD card	Installs an official update package from a computer or card.	Only use files from the manufacturer.
Wipe cache partition	Clears the system cache.	None to personal data.
Wipe data / factory reset	Erases user data.	High: erases everything.
Mount /system (older devices)	Makes the system partition readable.	Leave alone.
View recovery logs	Shows the log of the last recovery operation (see Section 9).	None
Run graphics / locale test	Developer diagnostics.	None
Power off	Shuts the phone down.	None



SECTION 6

6 Factory Reset Protocol (Last Resort)

6.1 Before you reset

- ☐ Back up photos, videos, contacts and messages (Google One / Samsung Cloud / iCloud, or to a computer).
- ☐ Move authenticator apps and security keys to a new device or save recovery codes. Many accounts lock you out otherwise.
- ☐ Note the phone number and carrier. Transfer or save eSIM details, because erasing an eSIM may need the carrier to reissue it.
- ☐ Know your Google (or Samsung) account password. Factory Reset Protection requires it after the reset.
- ☐ On iPhone, know your Apple Account password; Activation Lock requires it.
- ☐ Sign out of accounts and disable Find My / Find Hub if you plan to sell or send the phone for repair.
- ☐ Charge above 50% and keep the phone plugged in.
- ☐ Remove the SIM and memory card if you do not want them wiped or confused.

6.2 Performing the reset

Platform	Path
Pixel and stock Android	Settings > System > Reset options > Erase all data (factory reset) . Confirm and enter your screen lock.
Samsung Galaxy	Settings > General management > Reset > Factory data reset .
iPhone	Settings > General > Transfer or Reset iPhone > Erase All Content and Settings .
Phone will not boot or menus unusable	Recovery menu > Wipe data / factory reset (Section 5.1 shows how to enter recovery).

6.3 After the reset

- **Test the clean phone first.** Use it for a day before restoring everything. If it is smooth, the cause was software. Restore apps selectively, and watch for the app that brings the problem back.
- If the clean phone is still slow, hot, or crashing, the cause is likely hardware or firmware. Use the repair-versus-upgrade guide in Master Matrix ID 8.
- Sign in again, restore authenticator accounts, re-add the eSIM, and re-enable Find My / Find Hub.

SECTION 7

7 iPhone Equivalents

iOS does not expose partitions or a recovery menu you can use to clear caches. The equivalent steps are built into Settings, and deeper recovery uses a computer.

Goal	Steps	Data risk
Clear RAM	Restart: hold Side and either Volume button, slide to power off, then turn back on. Closing apps from the switcher does not free useful memory.	None
Force restart (frozen)	Press and release Volume Up, press and release Volume Down, then hold the Side button until the Apple logo appears.	None



Goal	Steps	Data risk
Free storage	Settings > General > iPhone Storage. Offload unused apps, delete large files, empty Recently Deleted.	Low
Clear Safari cache	Settings > Apps > Safari > Clear History and Website Data (older: Settings > Safari).	Signs you out of websites
Clear an app's cache	Use the app's own setting if present. Otherwise offload the app (keeps documents) or delete and reinstall.	Delete removes local data
Reset settings	Settings > General > Transfer or Reset iPhone > Reset > Reset All Settings or Reset Network Settings.	Settings only
Restore with a computer	Connect to a Mac or PC. Put the iPhone in Recovery mode (Volume Up, Volume Down, then hold Side until the recovery screen), then choose Update first and Restore only if needed.	Restore erases the phone

SECTION 8

8 Managing RAM

8.1 Checking memory use

Platform	Where to look	What to do
Samsung Galaxy	Settings > Battery and device care > Memory shows used and available RAM and offers Clean now . RAM Plus uses storage as virtual memory.	Close the apps listed as heavy. If RAM Plus makes the phone feel slow, lower the size or turn it off.
Pixel and stock Android	Developer options > Memory shows average and peak use over time (the exact path varies by version).	Identify apps with consistently high use and restrict, update or remove them.
iPhone	iOS does not show RAM figures. Signs of memory pressure: apps reload when reopened, Safari tabs refresh.	Restart, close very heavy apps, free storage, and update iOS.

8.2 Developer options, used carefully

- Enable by tapping **Build number** seven times in Settings > About phone. Turn Developer options off again when finished.
- **Running services** lists processes by memory use. Use it to spot a runaway app rather than to kill services.
- **Background process limit** and **Do not keep activities** are for diagnosis only. Leaving them on can break apps and drain battery. Always reset them to the standard settings afterwards.

Weekly routine

Restart once a week, keep apps updated, uninstall apps you no longer use, and keep storage below about 85–90% full. This outperforms any "booster" app.



SECTION 9

9 Reading and Managing Logs

Logs are timestamped records of what the phone was doing. They are mainly useful when you need to hand evidence to a support team or repairer. Three kinds matter here: **crash or ANR logs** (an app stopped responding), **memory-pressure records** (an app was shut down to free RAM), and **bug reports** (a bundle of everything).

Platform	How to capture	Where it goes
Android (any)	Settings > System > Developer options > Take bug report (Interactive or Full). Reproduce the problem while it runs, then share the finished report.	Saved as a zip; shared by email or cloud to support only.
Android (computer)	Enable USB debugging, connect, trust the computer, then run <code>adb bugreport</code> . For one app's memory, <code>adb shell dumpsys meminfo [package]</code> .	Saved on the computer. Turn USB debugging off afterwards.
Samsung	Samsung Members app > Get help or Support > error reports and diagnostics.	Sent to Samsung support.
Recovery logs	Recovery menu > View recovery logs shows the last recovery operation.	On screen. Photograph it for support.
iPhone	Settings > Privacy & Security > Analytics & Improvements > Analytics Data . Files starting JetsamEvent record memory-pressure shutdowns. For a full report, press and hold both Volume buttons and the Side button for about 1.5 seconds to trigger a sysdiagnose , wait around ten minutes, then find it in Analytics Data.	Share via AirDrop, email or Apple's Feedback Assistant, to Apple or a repairer only.

9.1 Terms you will see

Term	Meaning	What to do
ANR (Application Not Responding)	An Android app froze for several seconds.	Update or reinstall the app; check storage and RAM.
lowmemorykiller / lmkd / "out of memory"	The system closed an app to free RAM.	Normal occasionally. Frequent for one app means that app is too heavy.
Watchdog / "system server" restarts	A core process hung and the phone restarted itself.	Check for updates; if it repeats after a reset, seek service.
JetsamEvent	iOS ended a process because memory was low.	Same advice as above; reduce heavy apps.
Kernel panic / panic-full log	Low-level crash, sometimes hardware related.	Restore via computer; if repeated, hardware service.

Privacy of logs

Bug reports and sysdiagnose files can contain account names, device identifiers, installed-app lists, Wi-Fi names and approximate locations. Share them only through the manufacturer's support channel or an authorised repairer, never in public forums, and delete your copy afterwards. In the EU and UK you can ask a company what personal data it holds and for how long (GDPR / UK GDPR); US rights depend on the state.



SECTION 10

10 Troubleshooting Matrix

Symptom	Likely cause	Try first	Escalate when
Slow after a major update	System re-indexing; stale cache	Wait 1–3 days on Wi-Fi and power; restart	Still slow after a week: Safe Mode test, then wipe cache partition if available.
One app crashes or lags	Corrupt app cache or outdated version	Force stop, clear cache, update, reinstall	Crashes after reinstall: report to the developer with a bug report.
Whole phone laggy, storage nearly full	No free space for temporary files	Free up storage to under 85–90% used	Still laggy: Safe Mode test, then reset settings.
Boot loop or stuck on logo	Corrupt update or app	Force restart; boot to recovery and use wipe cache partition (if offered)	Persists: factory reset from recovery, then service (Matrix ID 14).
Cannot enter recovery	Wrong key combination or timing	Power off fully, use USB cable on Samsung, hold 8–10 seconds	Check the maker's guide for the exact model; button hardware may be faulty.
"No command" screen (Android)	Normal step before the menu	Hold Power and tap Volume Up once	Menu never appears: re-enter via bootloader.
No "Wipe cache partition" option	Seamless-update device	Skip the step; use Sections 3, 4 and 8	Not a fault.
Reset stuck or fails	Low battery, corrupt data partition	Charge above 50%, retry from recovery	Fails again: manufacturer service or official firmware restore tool.
Locked after reset (FRP / Activation Lock)	Previous account not removed	Sign in with the original Google or Apple account	Cannot recall credentials: use the account recovery process or proof of purchase with the maker.

SECTION 11

11 Privacy, Warranty and Regional Notes

Topic	United States	EU / UK
Factory reset and warranty	A factory reset through Settings is a normal user action and does not void warranty. Unlocking the bootloader or installing unofficial software may affect support; check the maker's terms.	Same principle. Consumer law (EU legal guarantee, UK Consumer Rights Act) still applies to faults, but unofficial modifications can complicate claims.
Before repair or return	Reset or back up, and turn off Find My / Find Hub. Repairers often cannot service a phone with device-lock still on.	Same. Remove accounts and back up; repairers handle personal data under GDPR / UK GDPR obligations.
Selling or recycling	Back up, sign out, factory reset, remove SIM. Some states require retailers to offer data wiping or recycling take-back.	Back up, sign out, reset, remove SIM. Use authorised take-back schemes for electronic waste.
Data you share with support	Share logs only with the maker or an authorised repairer. State privacy laws vary.	You can request access to, or deletion of, the data a company holds under GDPR / UK GDPR.



SECTION 12

12 Printable Checklists

Before a reset

- ☐ Backup completed and verified.
- ☐ Authenticator apps moved or recovery codes saved.
- ☐ Account passwords known (Google / Samsung / Apple).
- ☐ eSIM details saved; carrier contact ready.
- ☐ Find My / Find Hub turned off (for sale or repair).
- ☐ Battery above 50% and charger connected.
- ☐ Steps 0–6 of the ladder already tried.

After a reset

- ☐ Phone tested clean for a day.
- ☐ Apps restored in small batches.
- ☐ Authenticators and eSIM restored.
- ☐ Find My / Find Hub re-enabled.
- ☐ Storage under 85–90% full.
- ☐ Developer options turned off.
- ☐ Weekly restart reminder set.

SOURCES

Sources and verification

- Samsung Members community guidance on wiping the cache partition and entering recovery on Android 11+ devices (USB cable method), including One UI 7 and 8 posts; Samsung support page "How do I clear the cache on my device?" (samsung.com/uk/support/mobile-devices/how-do-i-clear-the-cache-on-my-device/)
- Digital Trends, *How to use recovery mode on Android*: Pixel entry combinations and the removal of the wipe-cache option on devices with seamless updates (digitaltrends.com/phones/use-recovery-mode-android/)
- Apple and Google support documentation for restart, storage, Safe Mode, reset and bug-report procedures (general manufacturer guidance)

Verification note. Samsung and Pixel recovery steps were checked against current community and press sources in October 2026. Menu names for Samsung, Pixel, iOS settings, Developer options paths, the iPhone sysdiagnose gesture, and Samsung Members error-report paths come from manufacturer documentation and standard practice and may differ by model and software version. Key combinations vary by model; confirm yours on the manufacturer's support page before attempting recovery mode.



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