

The Silence of the First Hello



System looks for
stale sessions:
`lastMessageAt < threshold`

*One missing line
meant new users were
entirely ignored by
Mio's proactive agent.*

New users haven't
sent a message yet.
`lastMessageAt = NULL.`

`NULL < threshold`
evaluates to `NULL`, not
`True`. The system stays
completely silent.

[Fix Applied] ➔ Added `OR lastMessageAt IS NULL.`
Mio finally says hello!

Catching Fake Photos in the Security Gauntlet



Don't trust the file extension.
Don't trust Content-Type.

Read the actual file bytes.
Magic byte signatures exposed
the hidden malware.

[Upload: photo.jpg]

[Hachiware's Scanner]

[Result: Rejected!]

Threat: Infinite Uploads

→ **Fix:** 500MB Global Memory Cap (max 3 concurrent files per user).

Threat: Stolen Media

→ **Fix:** Strict Ownership Checks via captured userId on mediaId.

Threat: Path Traversal

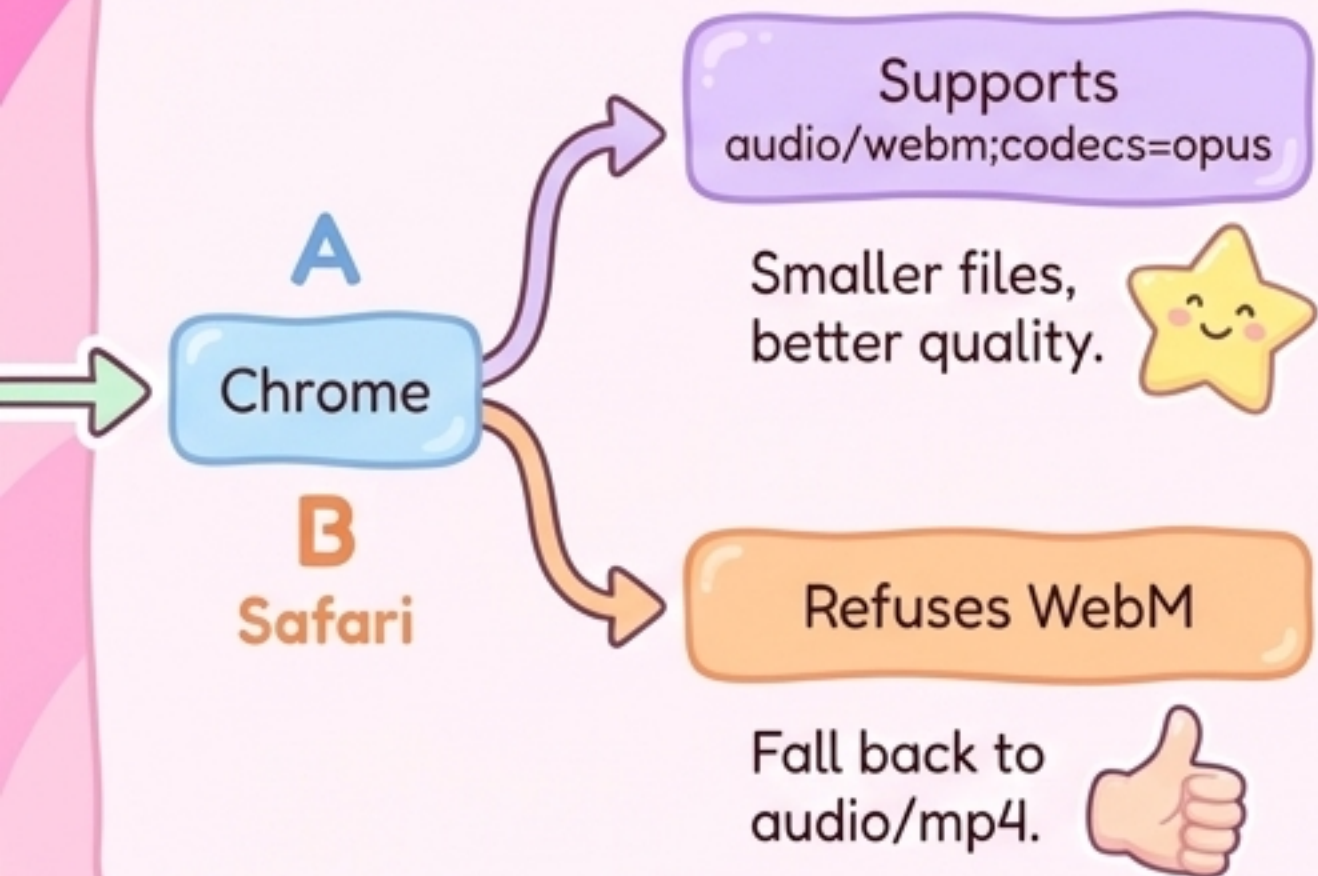
→ **Fix:** Filename Sanitization blocked ../../passwd.jpg.

Upload first, send later—securely.

Screaming into the Void: Codecs and Permissions

Waa!

Codec Negotiation



Error!
Permission Denied

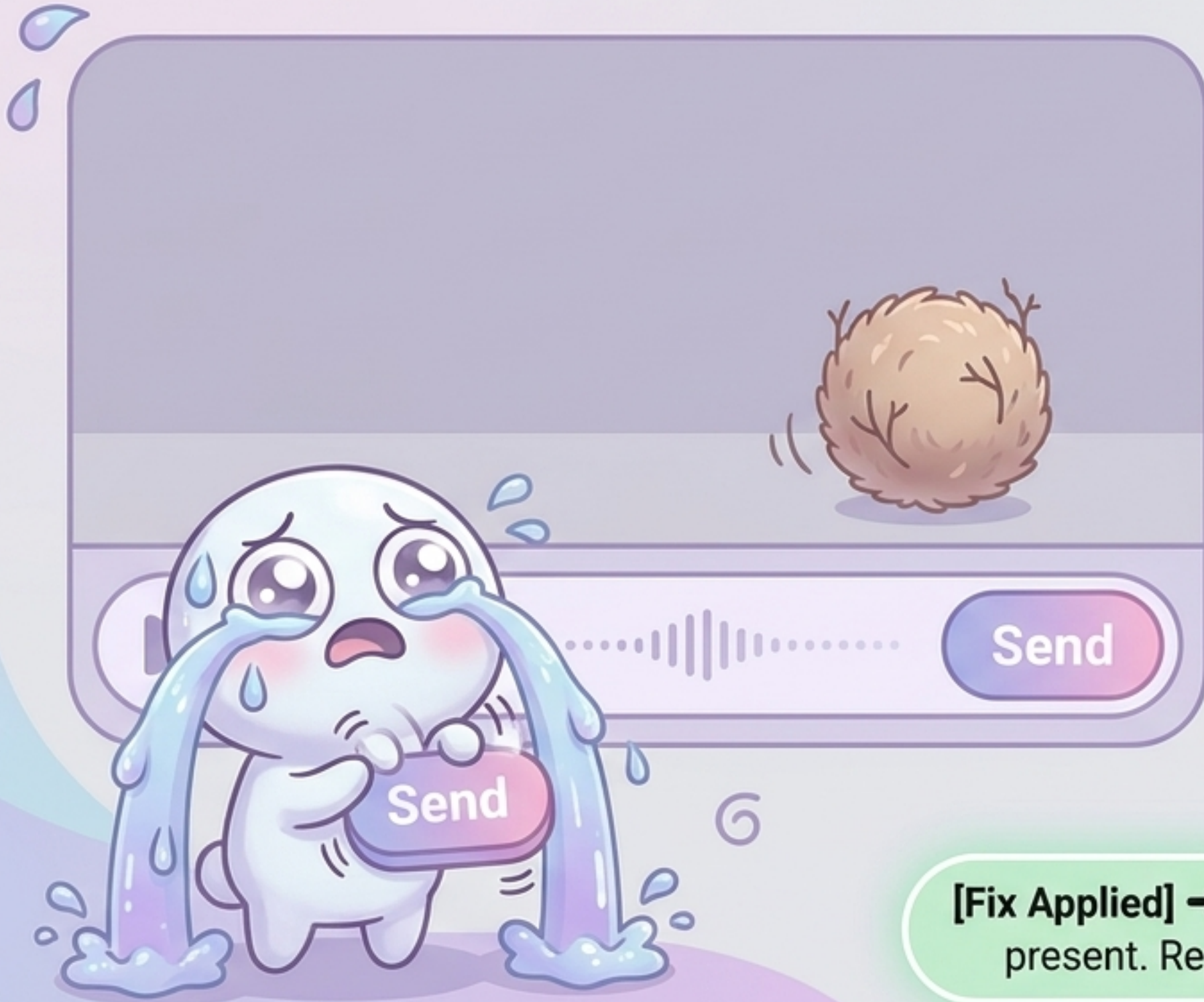
The Permission Alert

Old Code: Empty catch block swallowed mic errors silently.

New Code: Graceful UI Toast pops up: Unable to record, please check microphone permissions.

5-minute max recording limit applied.
(To prevent accidental infinite hot-mics!)

The Silent Drop: When Two Layers Conspire



Double Failure Collapse

Layer 1: Client Side Guard (flushToServer)

- **The Bug:** Exits early if text is empty.
- **The Result:** Voice notes (which have a mediaId but no text) are quietly discarded.



Layer 2: Server Side Guard (ChatSchema)

- **The Bug:** Used `.min(1)` on the text field.
- **The Result:** Even if the client managed to send it, the server rejected it for being empty.

[Fix Applied] → Switched to `.refine()`: Empty text is now valid if mediaIds is present. Replaced `setTimeout` with direct returns to end timing games.

From Code to Dashboard: Order Restored



Before (The Old Way)

1. Edit .env variable →
2. Redeploy server →
3. Pray.

😞 Fine for 3 users, bad for production.

After (v0.0.5)

1. Clean web UI at /admin (Chinese UI support) →
2. Manage users instantly.

Under the hood details:

Powered by telegram_allowlist DB table (Migration 0003) with an in-memory cache for lightning-fast access checks.

*The web chat is no longer a second-class citizen.
28 minutes to deploy. Total parity achieved.*