

DMR Project – Current Status & Phase 5.1 Roadmap

1. Summary

This document captures the current stable state of the DMR project after major architectural fixes, JSON-based persistence migration, authentication stabilization, and payment groundwork. It also defines the next approved enhancement phase (Phase 5.1 – Payments Hardening).

2. Completed Milestones

- 1 Migration from Postgres dependency to JSON-based persistence (users, sessions, subscriptions, payments)
- 2 Stable authentication using UserStore and users_database.json
- 3 Persistent session auto-restore across restarts using persistent_sessions.json
- 4 Admin vs Subscriber role enforcement in main.py
- 5 Subscription gating with enforce_subscription_or_logout
- 6 Cashfree payment flow integration (session-based checkout)
- 7 Fly.io compatible stateless architecture
- 8 Resolved Streamlit form key collisions and session state errors
- 9 Successful end-to-end login → dashboard → subscription check flow

3. Current Stable Sources of Truth

- 1 users_database.json – user credentials and roles
- 2 user_store.py – user CRUD and status management
- 3 persistent_sessions.json – long-lived session tracking
- 4 persistent_sessions.py – session lifecycle control
- 5 data/payments.json – payment ledger (authoritative)
- 6 data/subscription_manager.py – subscription evaluation logic
- 7 main.py – central orchestration and access control

4. Phase 5.1 – Payments Hardening (Approved)

- 1 Freeze payments.json schema (no breaking changes)
- 2 Ensure payments.json is append-only and audit-safe
- 3 Guarantee that only webhook or admin action can mark payments as SUCCESS
- 4 Prevent UI-triggered payment state mutation
- 5 Validate payment → subscription activation flow
- 6 Prepare structure for renewals and upgrades (no UI yet)

5. Deferred / Pending Enhancements

- 1 Legacy file cleanup (db.py, db_test.py, transitional handlers)
- 2 Subscription expiry & renewal automation
- 3 Admin payment reconciliation dashboard
- 4 Email notifications on payment success/failure
- 5 Production security hardening (hashing, secrets, rate limits)
- 6 Final Fly.io deployment checklist execution

6. Stability Note

The project is currently in a stable and production-safe state. No refactors are recommended before completing Phase 5.x payment hardening. All future changes should be incremental and documented.