Survale Test Plan & Pilot Guide — v1.0

1) Purpose

Defines test procedures, pilot parameters, and success criteria for the Survale MVP. The pilot validates reliability, accuracy, and operational usability with one law enforcement team (8–10 users).

2) Objectives

- Verify real-time map accuracy (≤5m deviation, ≤5s update latency).
- Validate operational stability for 8–10 concurrent users.
- Confirm operation lifecycle: create → join → active → end → export → purge.
- Evaluate usability and situational awareness under live field conditions.
- Measure data integrity (no crashes, accurate purge at +7 days).

3) Scope

The test covers the iOS app, Node backend, and Supabase database. External systems (CAD, body cam feeds, pings) are out of scope.

4) Environment

• iPhones (iOS 17+) • Supabase (self-hosted) • Node Ops Service (Docker Compose) • LTE/5G urban environment • APNs dev key

5) Pre-Test Setup

- Deploy Supabase schema (survale_schema_v1.sql).
- Launch Node service.
- Configure `.env` in iOS app (Supabase URL, API base).
- Register 8–10 test users and assign teams.
- Distribute Survale iOS app via MDM/TestFlight.
- Grant 'Always Allow' location and notifications.

6) Test Scenarios

- Operation Lifecycle — Create, invite, join, run 15+ mins, end.
- Map Accuracy — Verify 3–5s latency, ≤5m deviation.
- Messaging — Exchange text/photo/video, confirm order.
- Proximity Alert — 1km cross-team notification.
- Replay & Export — CA exports PDF correctly.

- Purge — Verify auto-purge after 7 days.
- Network Loss — Recover gracefully, show reduced accuracy.

7) Roles & Responsibilities

- Case Agent (CA): Manages operation and export.
- Team Members: Participate and provide feedback.
- Pilot Coordinator: Monitors backend, logs metrics.
- SysAdmin: Maintains uptime/backups.

8) Data Collection

• GPS accuracy logs • Chat latency • Battery impact (1hr) • Export file integrity • Error logs • User feedback

9) Success Metrics

- ≥95% updates <5s latency
- No crashes in 60+ min ops
- Export within 2 min
- 100% reconnect post signal loss
- Data purged after 7 days

10) Schedule

Week 1: Setup & onboarding Week 2: Controlled test Week 3: Field test Week 4: Review & finalize MVP

11) Risks & Mitigation

- GPS loss → show reduced accuracy
- Network drop → auto-reconnect
- Battery drain → vehicle power
- User confusion → quick start guide

12) Acceptance Criteria

Pilot success = reliable performance + user trust. • Map accuracy ≤5m • Updates ≤5s • No crashes/data loss • Accurate PDF exports • ≥4/5 user confidence