# KDT Aso

Autonomous Operations Platform

Knight Division Tactical

Feature Documentation — February 2026

# Platform Overview

| 16 | 11 | 7 | 100% |
|---|---|---|---|
| **FEATURES** | **AI AGENTS** | **LANGUAGES** | **COMPLETE** |

KDT Aso is the central command and control platform for Knight Division Tactical operations. It provides real-time situational awareness, AI-powered staff assistance, secure communications, and comprehensive operational management.

## 📋 Features

**1.** Authentication & Security

**2.** Voice Interface

**3.** Map/GIS Display

**4.** Standing Orders

**5.** Alert System

**6.** Sensor Integrations

**7.** Deployment Packaging

**8.** Admin Configuration Panel

**9.** Nigerian Languages (7)

**10.** Test Suite

**11.** Persistent Memory

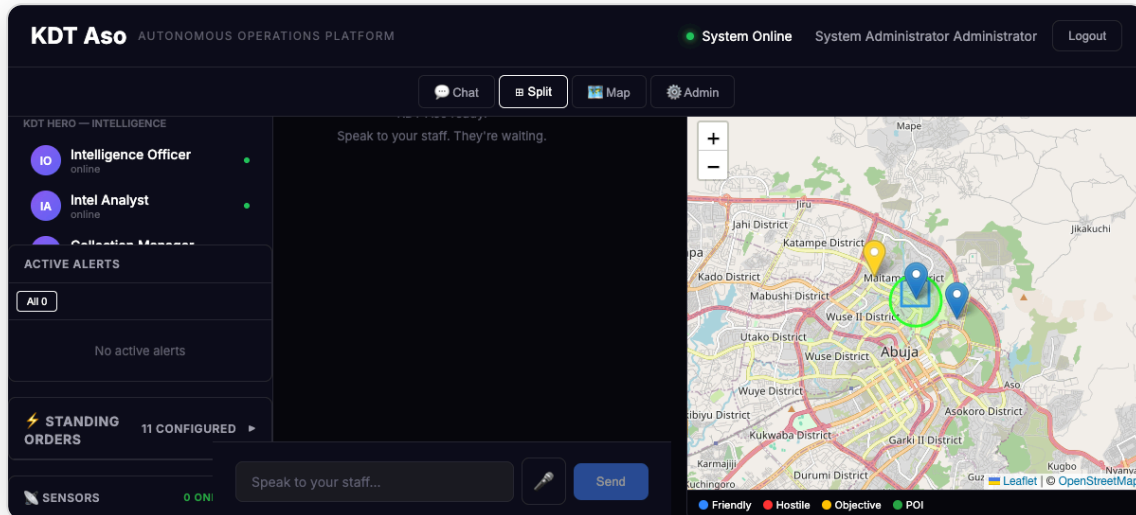**12.** Mobile PWA

**13.** Document Storage

**14.** Offline Mode

**15.** Backup System

**16.** End-to-End Encryption

# Main Dashboard



*Split view showing AI staff, alerts, standing orders, chat, and operations map*

The main dashboard provides a unified view of all operational data. The split view combines chat with the operations map, while the sidebar shows AI staff status, active alerts, standing orders, and sensor status.

# Core Features

## 1. Authentication & Security

- JWT-based authentication with secure sessions
- Role-based access control (RBAC)
- Protected API routes with middleware
- Session management with HTTP-only cookies

## 2. Voice Interface

- Speech-to-text input for hands-free operation
- Text-to-speech responses (ElevenLabs integration)
- Voice commands for common operations
- Real-time transcription

## 3. Map/GIS Display

- Interactive Leaflet map with OpenStreetMap tiles
- Marker types: Friendly, Hostile, Objective, POI
- Area of operations overlay
- Multiple map layers (Operational, Intelligence, Logistics)

## 4. Standing Orders

- 11 configurable standing orders

- Time-based triggers (schedules)

- Event-based triggers (conditions)

- Automatic execution by AI agents

# Operations Map
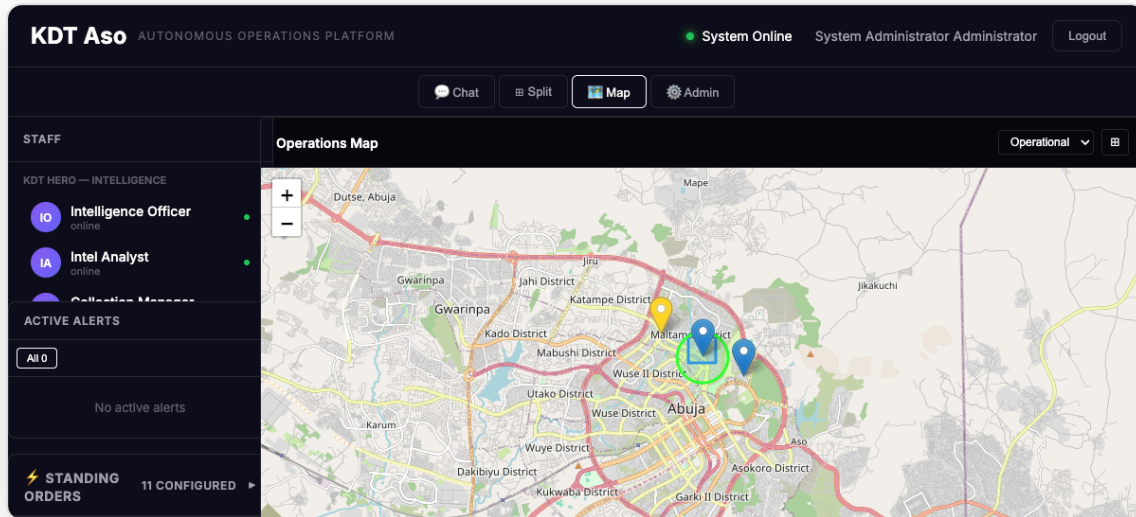


*Full-screen operations map centered on Abuja with tactical markers*

# Operational Features

## 5. Alert System

- Priority levels: Critical, High, Medium, Low
- Real-time WebSocket notifications
- Alert acknowledgment tracking
- Automated escalation rules

## 6. Sensor Integrations

- Support for multiple sensor types
- RTSP/ONVIF camera integration
- Real-time data streaming
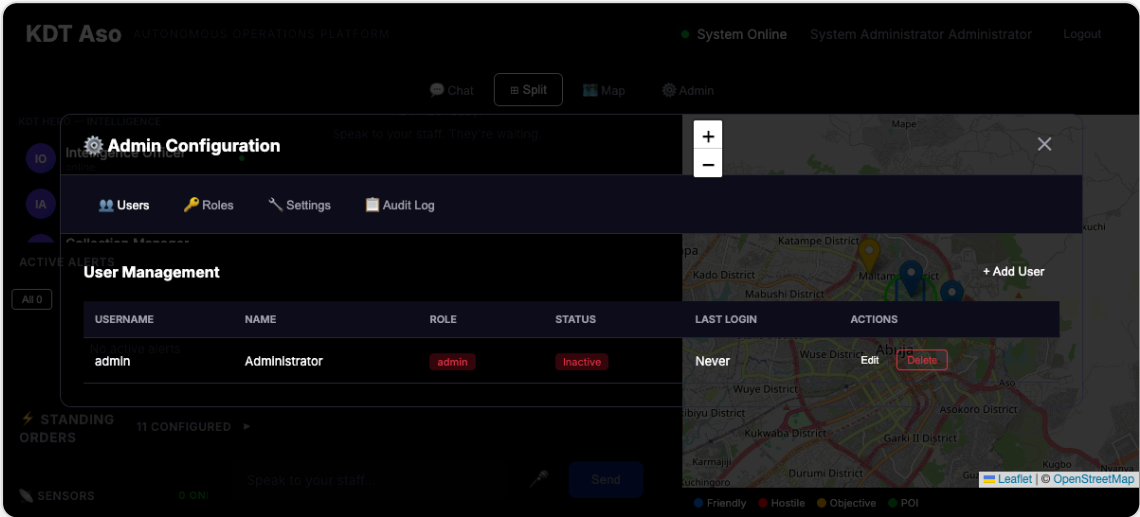- Sensor status monitoring

## 7. Deployment Packaging

- Docker containerization
- Docker Compose orchestration
- Production-ready Nginx configuration
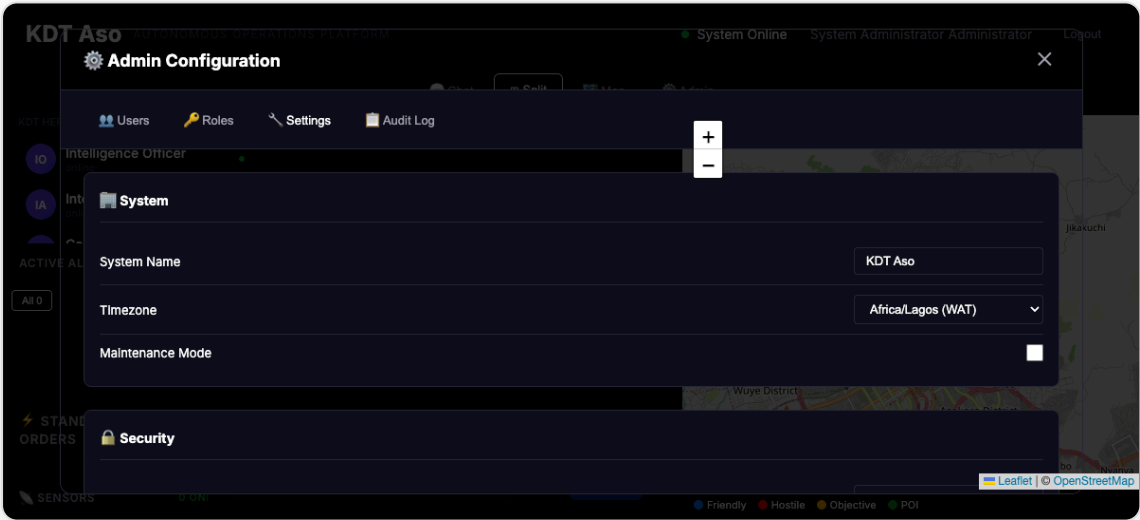- Automated build scripts

## 8. Admin Configuration Panel

- User management (add, edit, delete)

- Role management with permissions

- System settings configuration

- Audit log viewing

# Admin Panel



*User management interface with role assignment*



*System settings including timezone and maintenance mode*

# Platform Features

## 9. Nigerian Languages

- English (default)
- Hausa — هَوُسَ
- Yoruba — Èdè Yorùbá
- Igbo — Asụsụ Igbo
- Pidgin English
- Fulfulde
- Kanuri

## 10. Test Suite

- Jest testing framework
- API endpoint tests
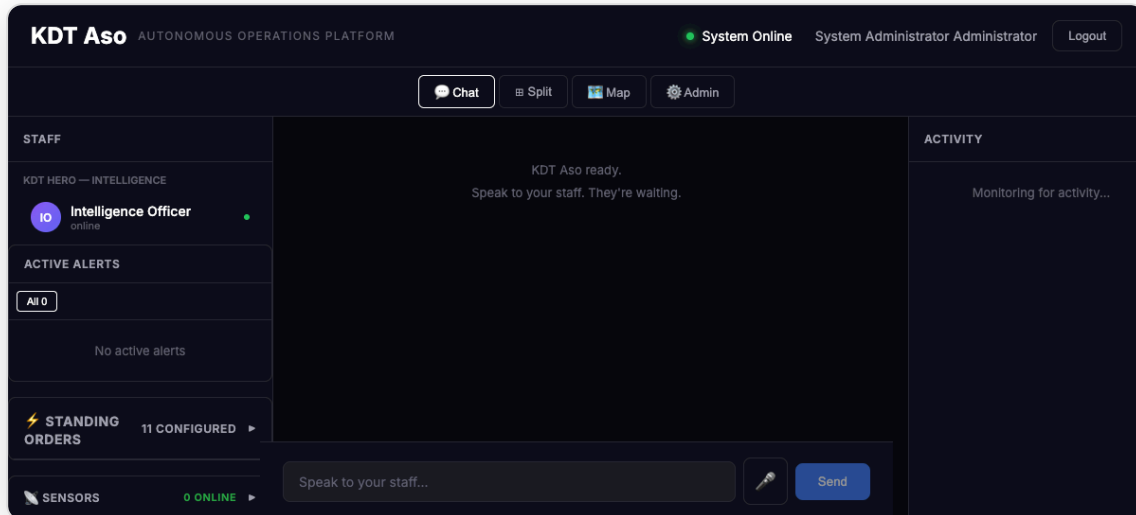- Authentication flow tests
- Integration tests

## 11. Persistent Memory

- Agent memory storage and retrieval
- Conversation context preservation
- Operational event logging
- Knowledge base with semantic search

## 12. Mobile PWA

- Progressive Web App manifest

- Install to home screen

- Push notification support

- Responsive mobile design

# Chat Interface



*Chat interface with AI staff selection and activity feed*

# Security & Data Features

## 13. Document Storage

- Categories: Intel, AAR, Mission, SITREP, Personnel, Asset, SOP
- Full-text search
- Document templates
- Version tracking

## 14. Offline Mode

- Service worker caching
- Offline fallback page
- Background sync when online
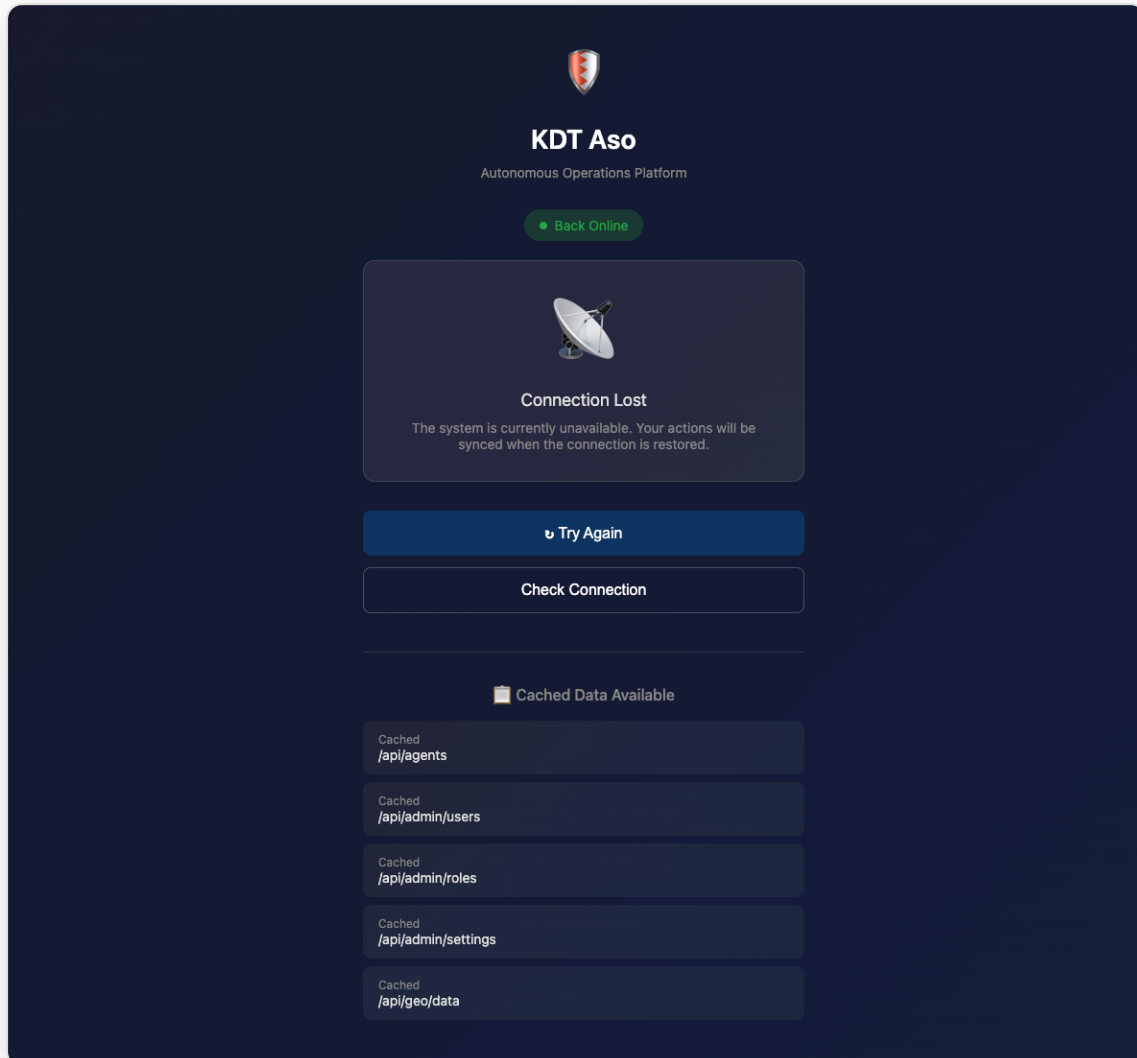- IndexedDB for offline data

## 15. Backup System

- Automated scheduled backups
- Compressed tar.gz archives
- Checksum verification
- Selective restore options

## 16. End-to-End Encryption

- AES-256-GCM encryption

- Secure key management

- Session key generation

- Message signing & verification

# Offline Mode



*Offline fallback page showing cached data availability*

# Feature Summary

| # | Feature | Status | Added |
|---|---------|--------|-------|
| 1 | Authentication & Security | ✅ Complete | Feb 18 |
| 2 | Voice Interface | ✅ Complete | Feb 18 |
| 3 | Map/GIS Display | ✅ Complete | Feb 18 |
| 4 | Standing Orders | ✅ Complete | Feb 18 |
| 5 | Alert System | ✅ Complete | Feb 19 |
| 6 | Sensor Integrations | ✅ Complete | Feb 19 |
| 7 | Deployment Packaging | ✅ Complete | Feb 20 |
| 8 | Admin Config Panel | ✅ Complete | Feb 20 |
| 9 | Nigerian Languages (7) | ✅ Complete | Feb 20 |
| 10 | Test Suite | ✅ Complete | Feb 20 |
| 11 | Persistent Memory | ✅ Complete | Feb 20 |
| 12 | Mobile PWA | ✅ Complete | Feb 20 |
| 13 | Document Storage | ✅ Complete | Feb 20 |
| 14 | Offline Mode | ✅ Complete | Feb 20 |
| 15 | Backup System | ✅ Complete | Feb 20 |
| 16 | End-to-End Encryption | ✅ Complete | Feb 20 |

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