

LocaNext System Architecture

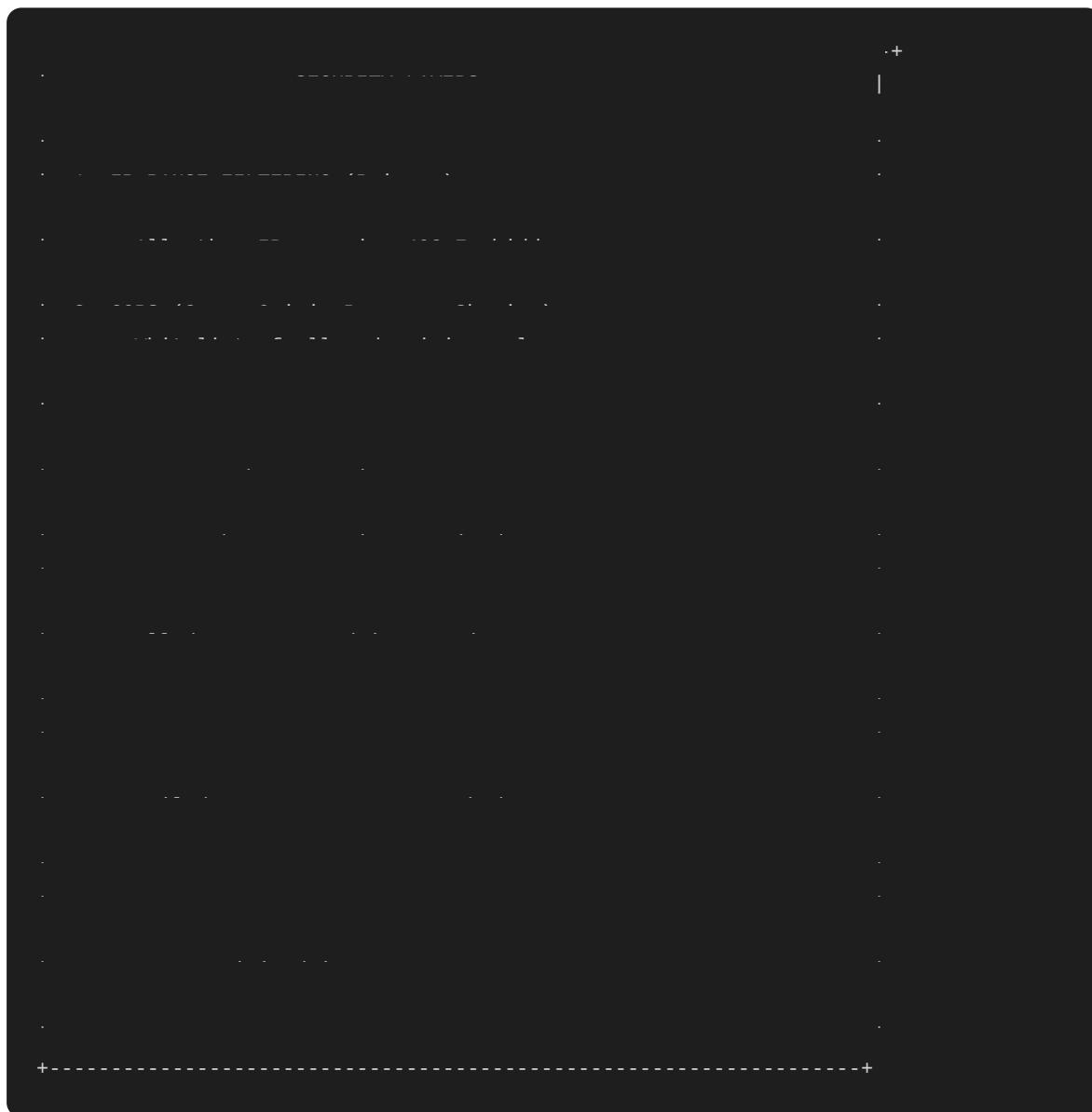
System Overview



Communication Protocols

Layer	Protocol	Port	Purpose
API	REST/HTTPS	443	Data exchange
Real-time	WebSocket (WSS)	443	Live updates
Database	PostgreSQL	5432	Central storage
Local DB	SQLite	-	Offline data

Security Protocols



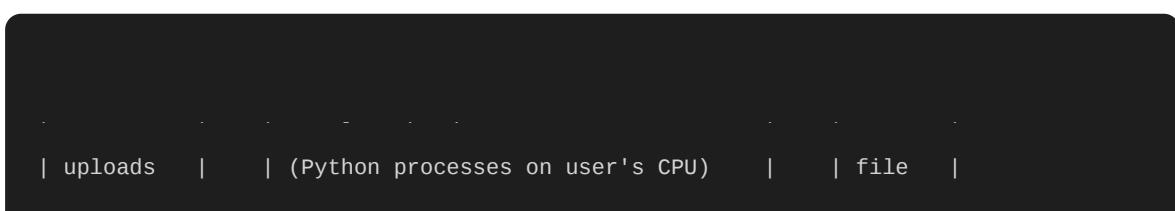
Database Architecture

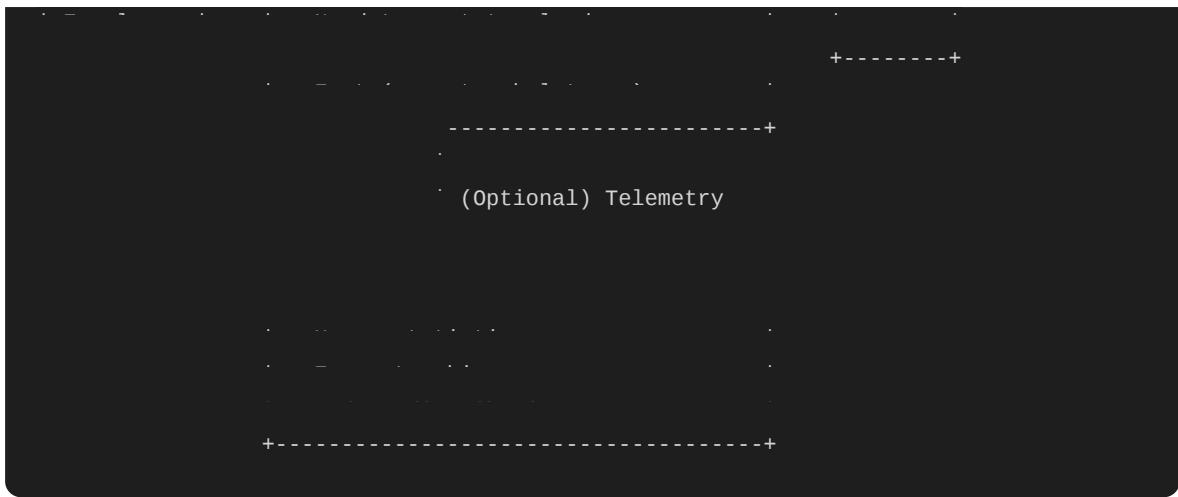


Application Components

Component	Technology	Purpose
Desktop App	Electron + Svelte	User interface
Backend	FastAPI + Python	API + Processing
Database	PostgreSQL/SQLite	Data storage
Real-time	Socket.IO	Live updates
Admin	SvelteKit	Monitoring

Data Flow





Test Coverage

Category	Tests	Status
Unit Tests	377+	PASS
API Tests	168	PASS
Security Tests	86	PASS
E2E Tests	164	PASS
Total	912	100%

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