

# 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

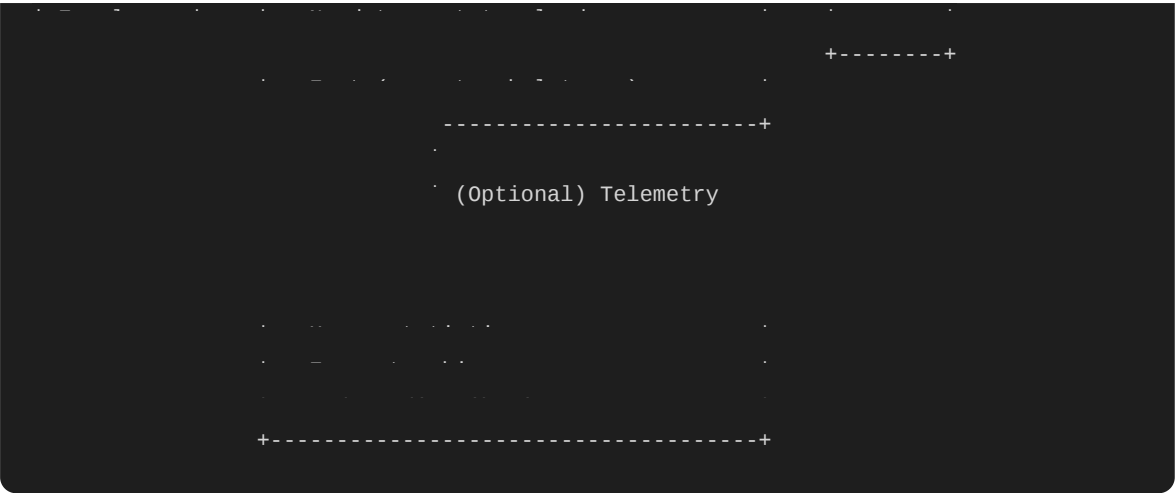
## Security Protocols



[illegible]

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

```
| uploads | | (Python processes on user's CPU) | | file |
```



## Test Coverage

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