

# Overview

**OnDelivery API** (OSAS - OnDelivery Smart Agent System) is a comprehensive multi-courier shipping logistics platform built with Node.js. The system enables:

- **Multi-courier aggregation** - Integrate and manage multiple shipping partners (JNE, Lion Parcel, JT Cargo, AnteRaja, etc.)
- **Real-time package tracking** - Track shipments from pickup to delivery
- **Dynamic pricing** - Calculate shipping fees based on origin, destination, weight, and service type
- **Warehouse operations** - Manage scanning, manifesting, handovers, and quality control
- **Financial management** - Handle billing, commissions, and VIP customer pricing
- **Driver mobile app** - Support delivery drivers with marketplace integration
- **Marketplace integration** - Connect with multiple e-commerce platforms

**Project Name:** ondelivery-api

**Version:** 1.0.0

**Main Entry Point:** `ondeliv-backend.js`

**Default Port:** 4220

**License:** ISC

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## Architecture & Technology Stack

### Core Technologies

Technology	Version	Purpose
Node.js	-	Runtime environment
Express.js	5.2.1	Web application framework
PostgreSQL	-	Primary database (dual setup: OSAS + ONMART)
Sequelize	6.37.7	ORM for database operations

### Key Dependencies

**Authentication & Security:**

- `jsonwebtoken` (9.0.2) - JWT token generation and verification
- `passport` (0.7.0) - Authentication middleware
- `passport-http` (0.3.0) - HTTP Basic authentication
- `bcryptjs` (3.0.3) - Password hashing
- `helmet` (8.1.0) - Security headers
- `express-rate-limit` (8.2.1) - Rate limiting protection

### Data Validation & Processing:

- `ajv` (8.17.1) - JSON schema validation
- `ajv-formats` (3.0.1) - Additional format validators
- `ajv-keywords` (5.1.0) - Extended validation keywords

### HTTP & External APIs:

- `axios` (1.13.2) - HTTP client for external API calls
- `cors` (2.8.5) - Cross-origin resource sharing

### File Processing:

- `multer` (2.0.2) - File upload handling
- `sharp` (0.34.5) - Image processing and optimization
- `exceljs` (4.4.0) - Excel file generation
- `pdfmake` (0.2.20) - PDF document generation
- `xlsx` (0.20.3) - Excel file parsing

### Utilities:

- `moment` (2.30.1) / `dayjs` (1.11.19) - Date/time manipulation
- `lodash` (4.17.21) - Utility functions
- `node-cron` (4.2.1) - Scheduled tasks
- `nodemailer` (7.0.11) - Email sending
- `nanoid` (5.1.6) - Unique ID generation
- `morgan` (1.10.1) - HTTP request logging
- `cli-color` (2.0.4) - Colorized console output

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