

Backend & Infrastructure

This page covers the core parts of the backend which works with **Spring Boot**.

Consider taking a proper look at the SpringBoot's documentation. It is not hard, most of the backend code are basic spring boot elements and concepts

<https://docs.spring.io/spring-boot/index.html>

1. Technical Core

- **Language/Framework:** Java 21 (Eclipse Temurin) using Spring Boot 3.4.0.
- **Build System:** Gradle. The project is built inside the container using `./gradlew build`.
- **API Port:** The backend runs internally on port `8081`.

2. The Bootstrap Logic (Admin Seeder)

We have a custom safety mechanism called `AdminUserSeeder.java`.

- **The Purpose:** If the database is fresh (0 users), the app will automatically create a "Super User."
- **Requirement:** You **must** provide `ADMIN_USER` and `ADMIN_PASS` environment variables in your `.env` file for the first startup.
- **Behavior:** If an admin already exists in the `admin_users` table, this seeder does nothing.

3. Security & Session Management

We use a hybrid security model to ensure the team can always access the dashboard.

- **Google OAuth 2.0:** Primary login for team members. Emails must be whitelisted in the Google Cloud Console.
- **Spring Session (JDBC):** Unlike standard apps, we store sessions in the **PostgreSQL database** (table: `SPRING_SESSION`).
 - *Benefit:* If the backend container restarts or updates, users are **not** logged out.
- **Cookie Policy:** `SameSite=Lax` and `HttpOnly` are enabled.

- *Note:* In full production with HTTPS, `server.servlet.session.cookie.secure` should be set to `true`.

4. Database & Persistence

We use **PostgreSQL 15** as our source of truth.

- **JPA/Hibernate:** Configured with `ddl-auto: update`. This automatically creates tables based on Java Entities.
- **File Uploads:** News images and team photos are stored in `/app/uploads`.
- **Volumes:** To ensure data isn't lost when containers stop, we use two named volumes:
 - `postgres_data`: For all SQL records.
 - `uploads_data`: For all physical images.

Revision #2

Created 2026-04-14 13:26:33 UTC by Illia Guzerya

Updated 2026-04-14 14:59:34 UTC by Dmytro Khorsun