

Deployment and Infrastructure

Environment Configuration

Our system is configured using a centralized `.env` file located in the `ACT-app/Docker` directory. This file provides runtime configuration for Docker containers and Node.js/Flask services.

Key Categories of Environment Variables

Category	Description	Example Values
Database	Credentials and connection URLs for PostgreSQL and CouchDB	POSTGRES_DB, COUCHDB_URL
OIDC Authentik	URLs and credentials for authentication flow	OIDC_ISSUER, OIDC_CLIENT_SECRET
Secrets	Encryption secrets and cookie salts	OIDC_COOKIE_SECRET
Email / SMTP	Used by Authentik for sending password resets, alerts, etc.	AUTHENTIK_EMAIL__USE RNAME, etc.
OpenAI API	Used by the Flask microservice to send translation requests	OPENAI_API_KEY

Modifiable vs. Static Variables

Type	Needs to Change for Custom Deployments?	Notes
OPENAI_API_KEY	✅ Yes	Must be obtained from your own OpenAI account.
OIDC_CLIENT_ID/SECRET	✅ Yes	Tied to your Authentik client config. Use new values if re-registered.
POSTGRES_PASSWORD	✅ Yes (for security)	Default is <code>authentikpassword</code> — change in production.
COUCHDB_URL	✅ Yes	Modify if host, user, or port changes.
OIDC_REDIRECT_URI	✅ Yes	Should match domain (e.g., <code>localhost</code> vs. <code>server IP</code>).

Authentik SMTP settings	⚠ Optional	Required only if using Authentik email features.
OIDC_CONFIGURATION_URL	⚠ Rarely	Only changes if Authentik service location changes.

To simplify setup, we provide a `.env.example` template file which can be renamed to `.env` and filled with production values.

Dependencies & Package Management

Node.js (Frontend + Backend)

- File: `package.json`
- Install via:

```
npm install
```

- Used for:
 - Express web server (port 3000)
 - Static file serving
 - Authentication redirect/callback handler

Python (Translation API Service)

- File: `requirements.txt`
- Install via:

```
pip install -r requirements.txt
```

- Used for:
 - FAISS + OpenAI embedding
 - Flask API (port 5000)
 - Index-based translation logic (RAG)

Docker (Containerized Infrastructure)

- File: `docker-compose.yml` (located in `ACT-app/Docker`)

- Spins up:
 - Authentik (OIDC server)
 - PostgreSQL
 - Redis
 - CouchDB
 - Node.js + Flask application containers

Secrets & Security Notes

- Secrets such as API keys and client secrets are only stored in `.env`, which is excluded from version control (`.gitignore`).
- Developers are encouraged to rotate OIDC secrets and passwords when deploying to new environments.
- Do **not commit your actual `.env` file** — use `.env.example` as a base.