SOA Platform — C4 Deployment (Docker Compose)

Docker Host
[Local machine]

edge network

nginx:alpine
[NGINX]

Serves SPAs; reverse proxy /api

↓ **HTTP**

gateway
[.NET 8 Web API]

JWT-secured API façade

HTTP | **HTTP** | **HTTP/SSE**

private network

student-service
[.NET 8 Service]

grade-service
[.NET 8 Service]

notification-service
[.NET Worker]

SSE broadcaster

ADO.NET | **ADO.NET** | **Publishes** | **Consumes** | **Invokes**

postgres:16
[PostgreSQL]

soa DB

rabbitmq:3.13-management
[RabbitMQ]

broker

gpa-function
[.NET 8]

FaaS GPA calc

↓ **Produces**

redpanda
[Redpanda]

Kafka-compatible streaming

Legend
container
node