

One Event - Master Technical Documentation

1. System Architecture Diagram & Description

The platform is built serverless on GCP using Cloud Run, Cloud SQL, Firestore, Firebase Auth, and Cloud Storage. It features multi-tenant SaaS architecture with separation by project ID or organization code.

2. Tech Stack Documentation

Frontend: Next.js, Tailwind, TypeScript

Backend: NestJS, TypeORM, PostgreSQL

Infra: GCP Cloud Run, Firebase, SendGrid, Twilio

CI/CD: GitHub Actions + Cloud Build

3. Environment & Deployment Strategy

Environment separation into dev, UAT, and production. Deployment via GitHub Actions to GCP Cloud Run (backend) and Vercel/GCP Static (frontend). Use GCP Projects per environment.

4. Secrets Management Policy

Secrets stored in GCP Secret Manager and mounted into Cloud Run via environment variables. Access managed via IAM roles per environment.

5. API Specification Template (REST)

All APIs documented in OpenAPI 3.0 (Swagger). Use RESTful naming:

GET /events

POST /events/:id/register

PUT /events/:id

DELETE /events/:id

6. Testing Strategy & Framework Plan

FE: Unit Test with Jest, e2e with Playwright

BE: Unit Test with Jest, Integration Test with SuperTest

Run all tests in CI

Coverage target: 80%+

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7. Coding Standard & Folder Structure (FE/BE)

FE: /src/components, /pages, /hooks, /features

BE: /src/modules, /common, /dto, /config

Use ESLint + Prettier, Husky hooks for formatting

8. Git & Branching Workflow

Main branches: main (release), dev (develop)

Feature branches from dev, PR into dev

Tag release from dev to main for deploy

9. Security Guidelines

Use Firebase Auth for ID validation

Protect API with JWT

Access control by role (admin, guest)

Cloud IAM used for all GCP resource separation

10. Monitoring & Logging Plan

Use Cloud Logging and Monitoring to track latency, error rates

Alert on API error rate spike, timeout > SLA

Store logs for 30 days in GCP

11. Feature Roadmap & Sprint Timeline

Phase 1 (Q3): MVP - Form Builder, Register, Email Noti

Phase 2 (Q4): QR Check-in, Analytics, Admin Roles

Use 2-week sprint with Jira/ClickUp tracking

12. Developer Onboarding Handbook

1. Clone repo
2. Set up .env file
3. Run docker-compose up for backend

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4. npm install && npm run dev for frontend
5. Read README and follow coding rules