








































## Estructura del Microservicio Firebase

firebase-microservice/

- |—  package.json
- |—  docker-compose.yml
- |—  Dockerfile
- |—  ecosystem.config.js # PM2 config
- |—  .env.example
- |—  README.md
- |—  app.js # Entry point
- |—  src/
  - |—  config/
    - |—  database.js # SQLite config
    - |—  firebase.js # Firebase config
    - |—  websocket.js # WebSocket config
    - |—  index.js
  - |—  controllers/
    - |—  notificationController.js
    - |—  statsController.js
    - |—  configController.js
    - |—  healthController.js
  - |—  services/
    - |—  firebaseService.js # Firebase API logic
    - |—  notificationService.js
    - |—  queueService.js # Queue management
    - |—  websocketService.js # Real-time updates
    - |—  statsService.js
  - |—  models/
    - |—  notification.js
    - |—  response.js
    - |—  config.js
    - |—  index.js
  - |—  routes/
    - |—  api.js # API routes
    - |—  notifications.js
    - |—  admin.js # Admin routes
    - |—  webhooks.js # Firebase webhooks
  - |—  middleware/
    - |—  auth.js # Authentication
    - |—  validation.js # Request validation
    - |—  rateLimit.js # Rate limiting
    - |—  errorHandler.js # Error handling

```
| | └─ logger.js      # Request logging
| | └─ utils/
| |   └─ logger.js    # Winston logger
| |   └─ validators.js # Data validators
| |   └─ helpers.js   # Helper functions
| |   └─ constants.js # App constants
| | └─ websockets/
| |   └─ handlers.js  # WebSocket handlers
| |   └─ events.js    # WebSocket events
| └─ public/
|   └─ index.html     # Landing page
|   └─ admin/
|     └─ index.html   # Admin dashboard
|     └─ notifications.html # Notification manager
|     └─ stats.html   # Stats dashboard
|     └─ config.html  # Configuration
|     └─ logs.html    # Logs viewer
|   └─ assets/
|     └─ css/
|     └─ js/
|     └─ images/
|   └─ docs/
|     └─ api-docs.html # Swagger UI
|     └─ integration.html # Integration guide
| └─ tests/
|   └─ unit/
|   └─ integration/
|   └─ fixtures/
| └─ docs/
|   └─ API.md
|   └─ DEPLOYMENT.md
|   └─ INTEGRATION.md
| └─ database/
|   └─ init.sql      # Initial schema
|   └─ migrations/
|     └─ 001_initial_schema.sql
```