

# Backend Development Proposal

Node.js • PostgreSQL • Docker • Postman

Replacement of the current stub infrastructure with a production-grade Node.js API, complete PostgreSQL datastore, and Dockerized deployment workflow. The scope covers 47 endpoints, authentication, authorization, quality gates, and documentation to enable a seamless handoff to your internal team.

## Technology Stack & Approach

- Node.js (TypeScript) service layer with layered architecture and dependency injection.
- PostgreSQL schema covering users, companies, agencies, reviews, favorites, and activity logs.
- Role-based access control enforcing permissions for admin, sub-admin, agency, and user personas.
- JWT-backed sessions plus email-code (magic link) authentication, secured with Redis or Postgres for token tracking.
- Dockerfile and docker-compose for repeatable local, staging, and production deployments.
- Comprehensive CI-friendly testing suite and documented Postman collection for every endpoint.

## Module & Investment Breakdown

| Module / Task                       | Description  | Cost (USD) |
|-------------------------------------|--|------------|
| 1. Authentication & Role Management | Email-code magic link login, JWT sessions, and role permissions for admin, sub-admin, agency, and user personas. | \$ 500     |
| 2. Admin APIs                       | Five CRUD endpoints covering admin list, create, update, delete, and detail views.                               | \$ 100     |
| 3. Admin Dashboard Stats            | Single endpoint delivering real-time KPI snapshots for admins.   | \$ 20      |
| 4. Agencies (Future Use)            | Foundational endpoint to onboard future agency integrations.   | \$ 20      |
| 5. Agency Company                   | Two endpoints to manage agency company profiles and metadata.  | \$ 40      |
| 6. Agency Dashboard                 | Single endpoint surfacing metrics and alerts for agencies.   | \$ 20      |
| 7. Agency Notifications             | Three endpoints for notification list, read-state updates, and preferences.                                      | \$ 60      |
| 8. Company Profile                  | Endpoints for retrieving and updating the public-facing company profile.   | \$ 40      |

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| 9. Agency Reviews                                  | Four endpoints to submit, moderate, and surface agency reviews.        | \$ 80  |
| 10. Companies (Admin + Directory)                  | Five endpoints spanning admin controls and public directory listings.  | \$ 100 |
| 11. Favorites                                      | Three endpoints covering add, remove, and list favorite companies.     | \$ 60  |
| 12. Directory Categories                           | Single endpoint to manage discoverability categories.                  | \$ 20  |
| 13. Directory Listings                             | Single endpoint powering filtered listing retrieval.                   | \$ 20  |
| 14. Recent Activities                              | Single endpoint exposing notable in-app activities.                    | \$ 20  |
| 15. Recent Companies                               | Three endpoints to highlight latest company additions.                 | \$ 60  |
| 16. Recent Reviews                                 | Three endpoints surfacing newest user and agency reviews.              | \$ 60  |
| 17. Subadmin Profile                               | Two endpoints for subadmin profile read and update.                    | \$ 40  |
| 18. Subadmin Assigned Companies                    | Three endpoints to manage assignments between subadmins and companies. | \$ 60  |
| 19. Subadmin Reviews                               | Three endpoints governing subadmin review workflows.                   | \$ 60  |
| 20. Users CRUD                                     | Four endpoints to create, read, update, and delete user records.       | \$ 80  |
| 21. Database Schema & Setup                        | Normalized PostgreSQL schema with relations, indexes, and constraints. | \$ 200 |
| 22. Project Structure & Docker                     | Production-ready Node.js layout plus Dockerfile and docker-compose.    | \$ 150 |
| 23. Testing & Postman Collection                   | Unit + integration tests alongside a documented Postman collection.    | \$ 200 |
| 24. API Integration & Long-Term Support (Optional) | Integration assistance, monitoring, bug fixes, and priority support.   | \$ 500 |

Core development (modules 1-23): \$ 2,010

Optional long-term support (module 24): \$ 500

**Total investment: \$ 2,510**

## Key Deliverables

- 47 fully implemented REST endpoints with validation, data access layer, and OpenAPI-ready documentation.

- Email-code authentication, JWT session lifecycle, and granular role-based authorization policies.
- Normalized PostgreSQL schema with migrations, referential integrity, and performance indexes.
- Dockerized runtime with environment-specific configuration, health checks, and production logging hooks.
- Automated unit and integration tests covering critical modules plus a ready-to-import Postman collection.
- Knowledge transfer session, deployment checklist, and onboarding support for your internal team.

## **Timeline & Next Steps**

Core delivery is estimated at 6-8 weeks depending on review cycles. I will provide weekly progress reports, sandbox deployments, and rolling demos so stakeholders can validate functionality early.

Upon approval, I can begin immediately with a kickoff session to confirm environment access, non-functional requirements, and success criteria.

Thank you for the opportunity to partner on this rollout. I am excited to deliver a maintainable API layer that positions the platform for long-term growth.