

# 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

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.