

Rad Link: Enterprise Traffic Intelligence

Scalable. Serverless. Live Production Asset.

RazaSoft Tech | Semester Project 2025

1. The Vision: Radical Transparency

Rad Link is a high-performance traffic intelligence engine. We moved beyond localhost development to deploy a fully resolvable, brand-ready product available to the global market.

Market Differentiators:

- Stupidity Dashboard:** Real-time aggregation of OS wars and traffic heatmaps.
- Zero-Cost Idle:** Serverless architecture ensures we pay nothing when traffic is low.

4. Frontend: The 0ms Latency UI

Hosted at razasoft.tech, the frontend is built with Flutter 3.x and Riverpod. It implements an **Optimistic UI** pattern to eliminate perceived network latency.

The “Cyber-Glass” Experience:

- Instant Feedback:** When a user interacts with the domain, the UI updates instantly while the API synchronizes in the background.
- Mega-Sync Engine:** A single call to the API hydrates the entire dashboard state in one frame.

5. Business Value & Scalability

The ability to secure and deploy **custom domains** transforms this from a coding project into a marketable SaaS product.

Key Deliverables:

- Brand Identity:** Full control over DNS allows for professional branding via razasoft.tech.
- Infinite Scalability:** DynamoDB On-Demand capacity handles viral traffic spikes hitting the domain without manual sharding.
- Cost Optimization:** By decoupling SSL from managed services, we reduced infrastructure overhead significantly.

System Visualization

[Insert Dashboard Screenshot]

Fig 1. Live traffic analysis on razasoft.tech

3. Unified Compute Architecture

We utilize a **Monolithic Lambda** (Node.js 20.x) to handle all traffic hitting api.rayasoft.tech.

DynamoDB Single Table Design: We maximized efficiency by overloading keys in a single table.

Entity	PK	SK
Link Meta	LINK#<id>	META
Analytics	LINK#<id>	STATS#<date>
Global	SYSTEM	GLOBAL

Atomic Transactions: Using `TransactWriteItems`, a single click triggers three atomic updates simultaneously: the link count, the user's stats, and the global dashboard.