Technical Stack

Server Infrastructure

Hetzner Dedicated Server

- **Purpose**: Primary host for all services and applications.
- **Specifications**:
  - **CPU:** Intel Xeon
  - **RAM:** 256 GB DDR4
  - **Storage:** 2 x 480GB Enterprise SSD
  - **Network:** 1+ Gbps Uplink

Proxmox Virtualization

- **Purpose**: Hypervisor for managing and isolating virtual environments.
- **Features**:
  - Virtual Machine and Container orchestration.
  - Snapshot and backup management.
  - Resource monitoring and allocation.

Application and Service Management

Coolify

- **Purpose**: Simplified orchestration of Docker containers and CI/CD pipelines.
- **Features**:
  - Application deployments and monitoring.
  - Automated builds from GitHub repositories.
  - Reverse proxy and SSL management.

Services Deployed via Coolify

1. **Redis**
   - **Purpose**: In-memory data store for caching and key-value storage.
   - **Use Case**: High-performance caching for the Next.js application.

2. **Next.js Application**
   - **Version**: 14
   - **Features**:
     - App Router for advanced routing.
     - Developed in TypeScript for type safety and maintainability.
   - **Deployment**: Built and served via Coolify.

Code Repository

GitHub

- **Purpose**: Version control and collaboration platform for application development.
- **Key Features**:
  - Centralized repository for all application code.
  - Integrated with Coolify for CI/CD pipelines.
  - Branch management and pull request workflows.

Network and DNS

Cloudflare

- **Purpose**: DNS management and proxy services for enhanced security and performance.
- **Domain**: `z.razar.io`
- **Features**:
  - DNS resolution for the Hetzner server.
  - Proxy and caching services for improved application performance.
  - SSL/TLS certificate management for secure communication.

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