Medusa Project Structure

The open-source alternative to Shopify. Medusa is a modular, high-performance headless commerce engine built with Node.js, featuring a clean monorepo structure that separates the core engine, admin dashboard, and its extensive module ecosystem.

Updated 2025-12-30

#medusa #ecommerce #nodejs #monorepo #turborepo #headless-commerce #open-source

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Project Directory

```
medusa/
  packages/  Core & official…
    medusa/  The core commer…
      src/  Core logic & lo…
      package.json
    admin/  The admin dashb…
    modules/  Architecture v2…
    cli/  Medusa command …
    design-system/  UI components f…
  www/  Marketing and l…
  turbo.json  Turborepo confi…
  package.json  Root workspace
```

Repository Info

Repository - medusajs/medusa

Stars - 24k+

License - MIT

Last Analyzed - December 2025

Tech Stack

Engine - Node.js (Express)

Language - TypeScript

Database - PostgreSQL with MikroORM/Drizzle

Admin - React

Workflow - Medusa Workflows (Durable)

Architecture Notes

Medusa v2 has introduced a major shift towards a fully modular architecture. Instead of a monolithic core, commerce functionality is now split into independent 'Modules' (like Product, Cart, Order) that communicate via a central service bus. This allows developers to swap out core components or scale them independently. They also use 'Workflows' to manage complex, multi-step asynchronous business logic with built-in state management and retries.

Key Directories

packages/medusa/ - The orchestration layer that ties all modules and plugins together

packages/modules/ - The new home for decoupled business logic in the v2 architecture

packages/admin/ - A highly extensible React-based dashboard for managing commerce data

packages/cli/ - Essential tools for scaffolding and managing Medusa projects

Why This Structure?

Medusa is a prime example of modern, scalable Node.js architecture. Its transition to a modular system and its use of durable workflows make it an essential case study for building complex, mission-critical backend systems. It perfectly balances flexibility for developers with a robust core for commerce.