

HAPI Philosophy

What is HAPI?

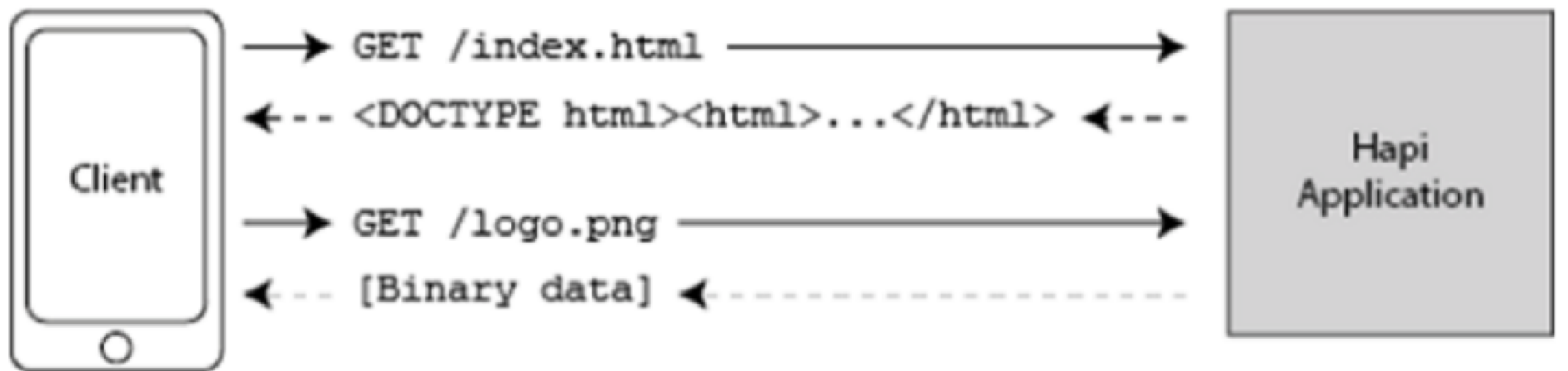
- hapi.js is an open source framework for building web applications with Node.
- Can be used for building:
 - Web App
 - API Server



“A rich framework for building applications and services hapi enables developers to focus on writing reusable application logic instead of spending time building infrastructure.”

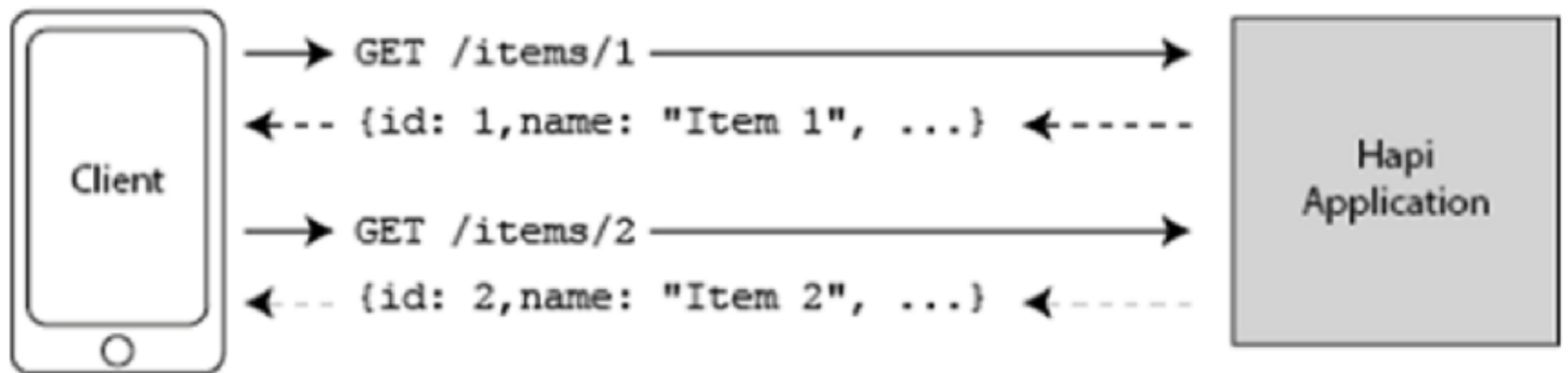
Web Application

- Application delivers a Conventional Web Application
- All data conveyed in HTML format
- Client is a Web Browser

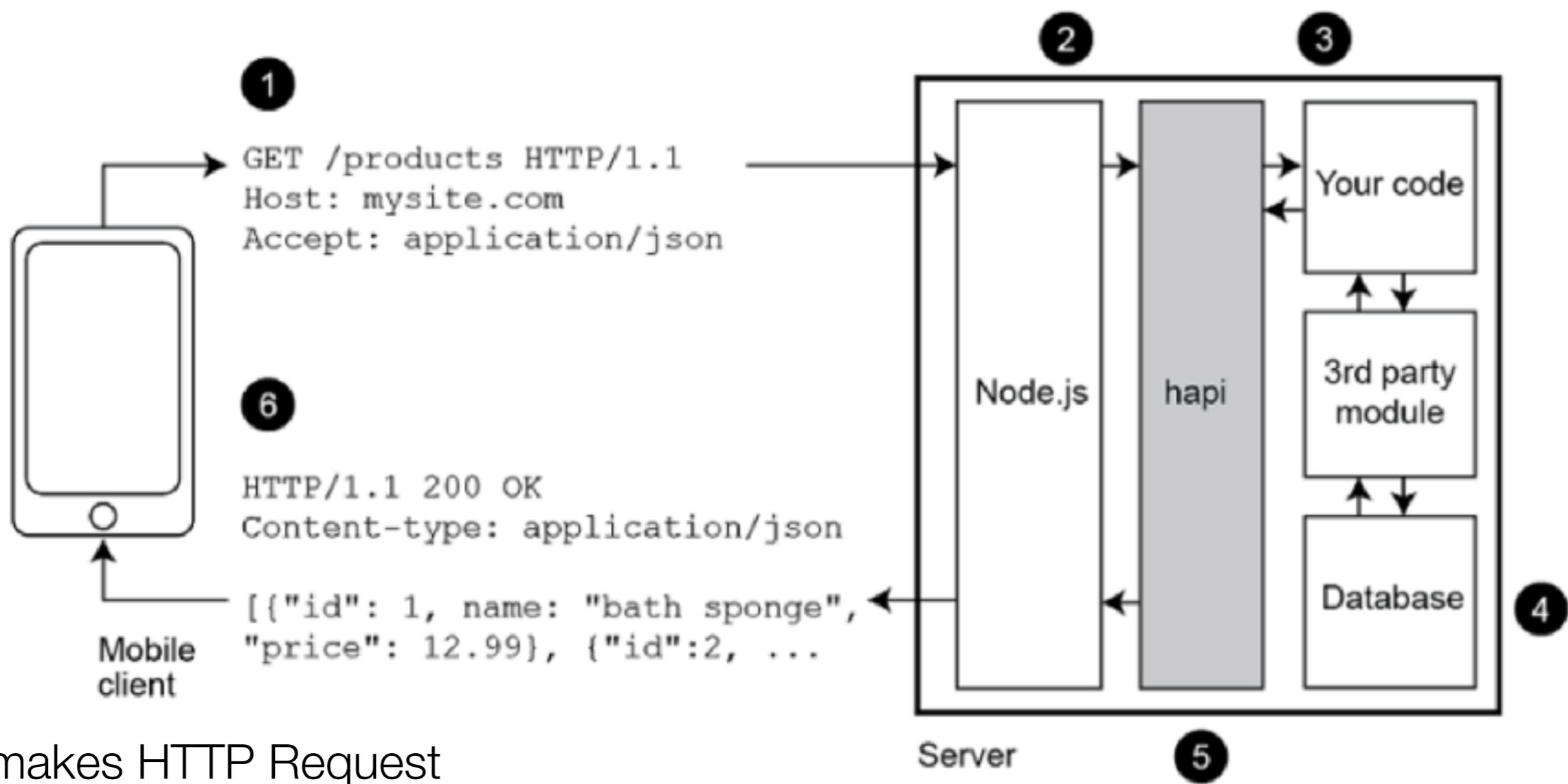


API Server

- Application delivers an Application Programming Interface
- All data conveyed in JSON format
- Client are other programs : mobile, test clients, js client apps



HAPI & Node

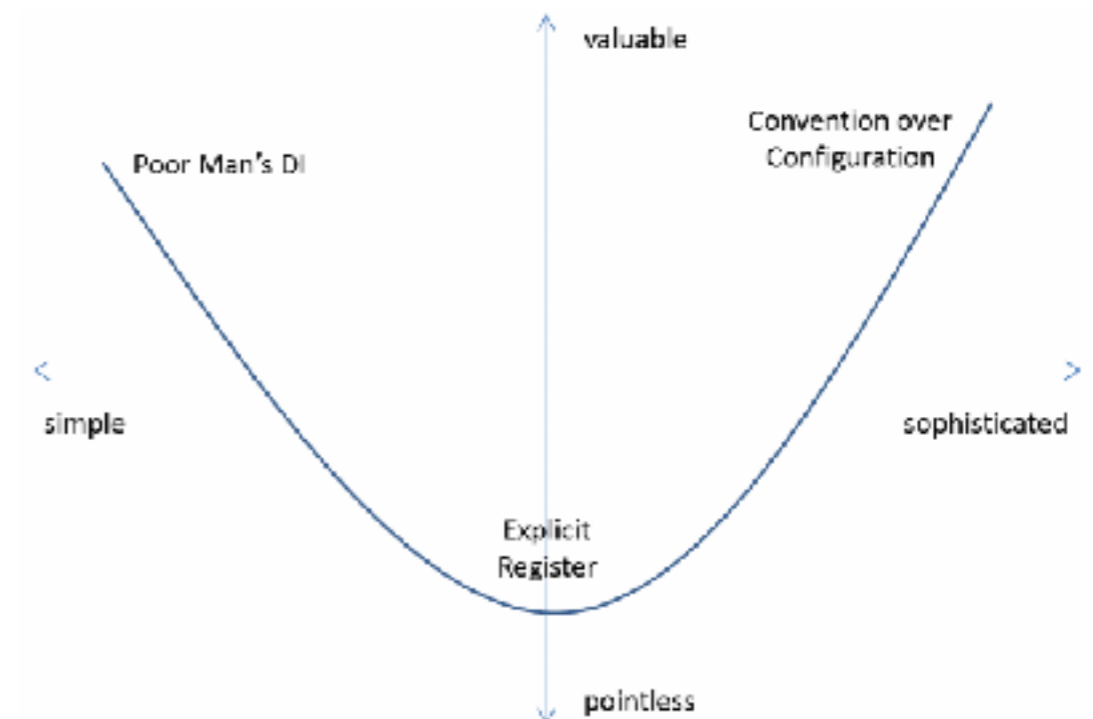


1. Client makes HTTP Request
2. Request received by Node and forwarded to api
3. Hapi authenticates user and routes request to correct function
4. Application logic executes, retrieves data from database
5. Data passed to Hapi reply function. Hapi validates, caches data.
6. Data transmitted over HTTP by node to client

Why Choose Hapi?



- Its Node
- Its Modular
- It favours Convention over Configuration (or Code)



Why Hapi? - its Node



- Node is strong for building APIs.
- JSON has become the de facto standard encoding for transferring data over the web.
- Working with JSON in JavaScript is a natural choice.
- The low-level implementation details of Node's runtime let you scale your API to thousands of concurrent users without using expensive hardware.

Why Hapi? - Modularity

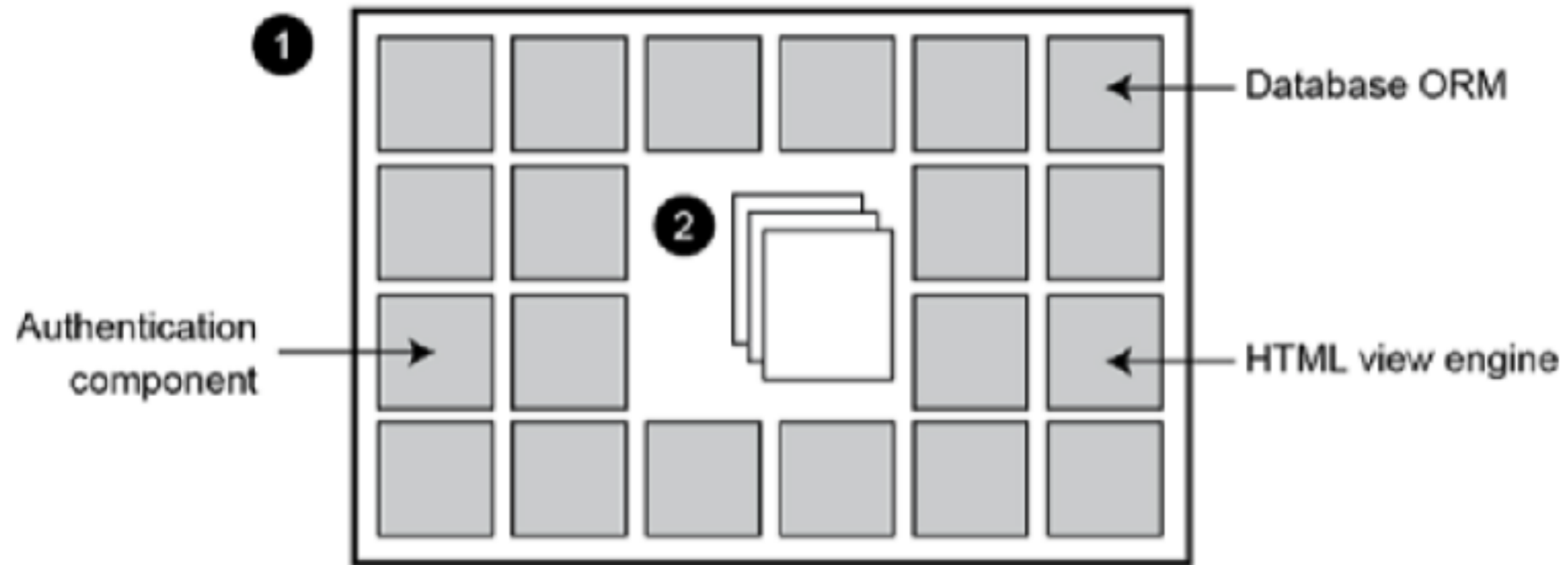


- Hapi plugin system lets you join together isolated chunks of applications like Lego and have them run as a single application.
- These individual chunks or plugins can be developed, tested and distributed (as npm packages) totally independently, maybe by different developers or teams in a large organisation
- Plugins also let developers create functionality to share with the entire open- source community.

Why Hapi? - Convention over Configuration

- Configuration-over-code means that there aren't lots of methods to remember to perform commonly required tasks
- Instead complex behaviours are wrapped up into simple configuration-driven APIs.
- You don't need to start learning all these configuration options until you really need them because sensible defaults are always chosen for you by the framework

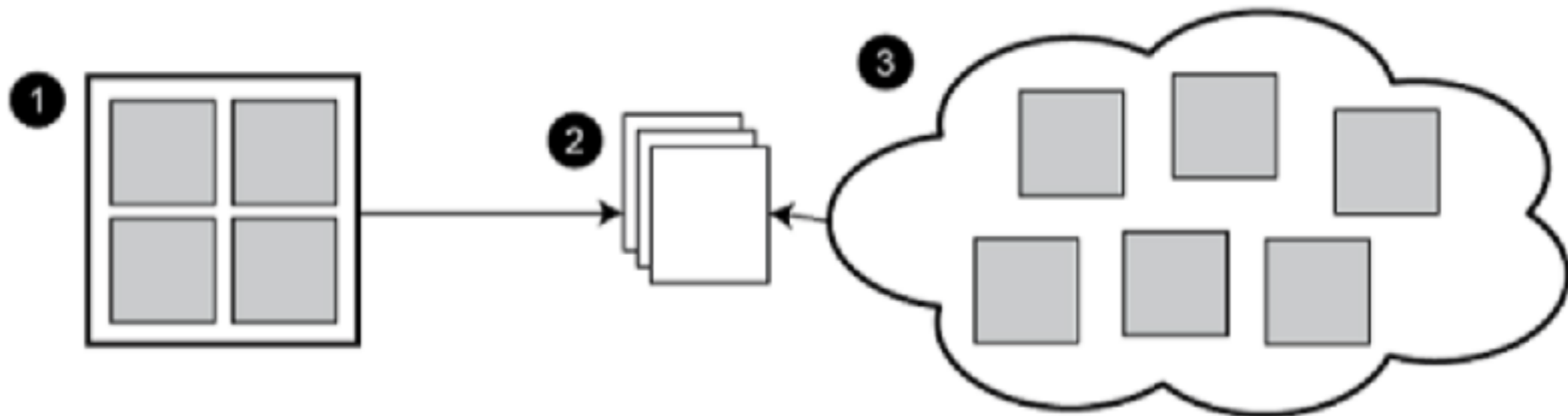
Types of Framework: Monolithic



- All Encompassing - Highly Opinionated
1. Large Application Library with Many Components
 2. Application is tightly bound to the framework and may be challenging to use external software

Types of Framework: MicroFramework

- Lightweight, thin wrappers.
1. Small framework library with few components
 2. Application is independent of framework
 3. Application relies on many 3rd party libraries



Framework Spectrum

All Encompassing -
Highly Opinionated

- Highly Opinionated frameworks require you to do things in a predictable and consistent way
- MicroFrameworks are often thin wrappers around some native capability of the platform to offer convenient APIs for common tasks

e.g. Rails, Sails



Express



e.g. Sinatra, Express

Micro Frameworks
- Lightweight

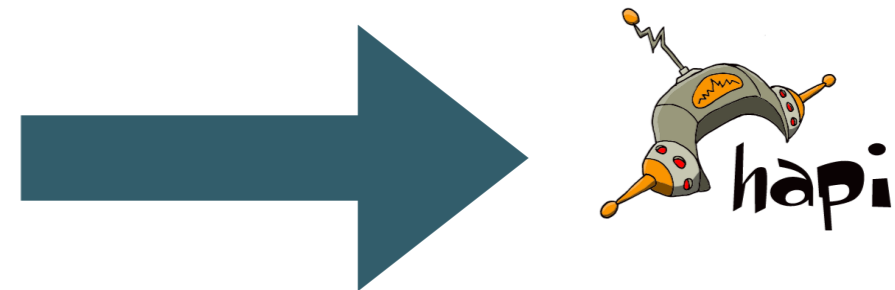
Hapi Philosophy

All Encompassing -
Highly Opinionated

e.g. Rails, Sails



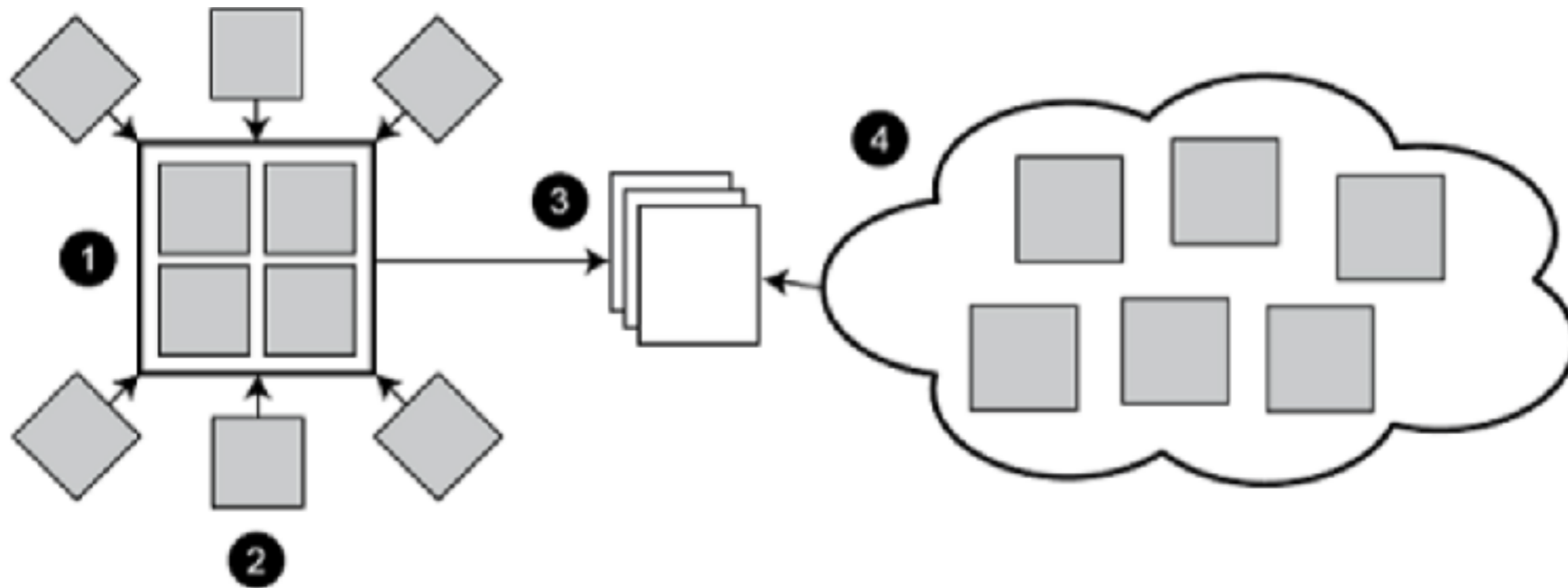
- Hapi threads a middle line between offering rich functionality out of the box while staying unimposing.
- The core library of hapi provides only the essential features that you will need when creating almost any modern web application.



e.g. Sinatra, Express

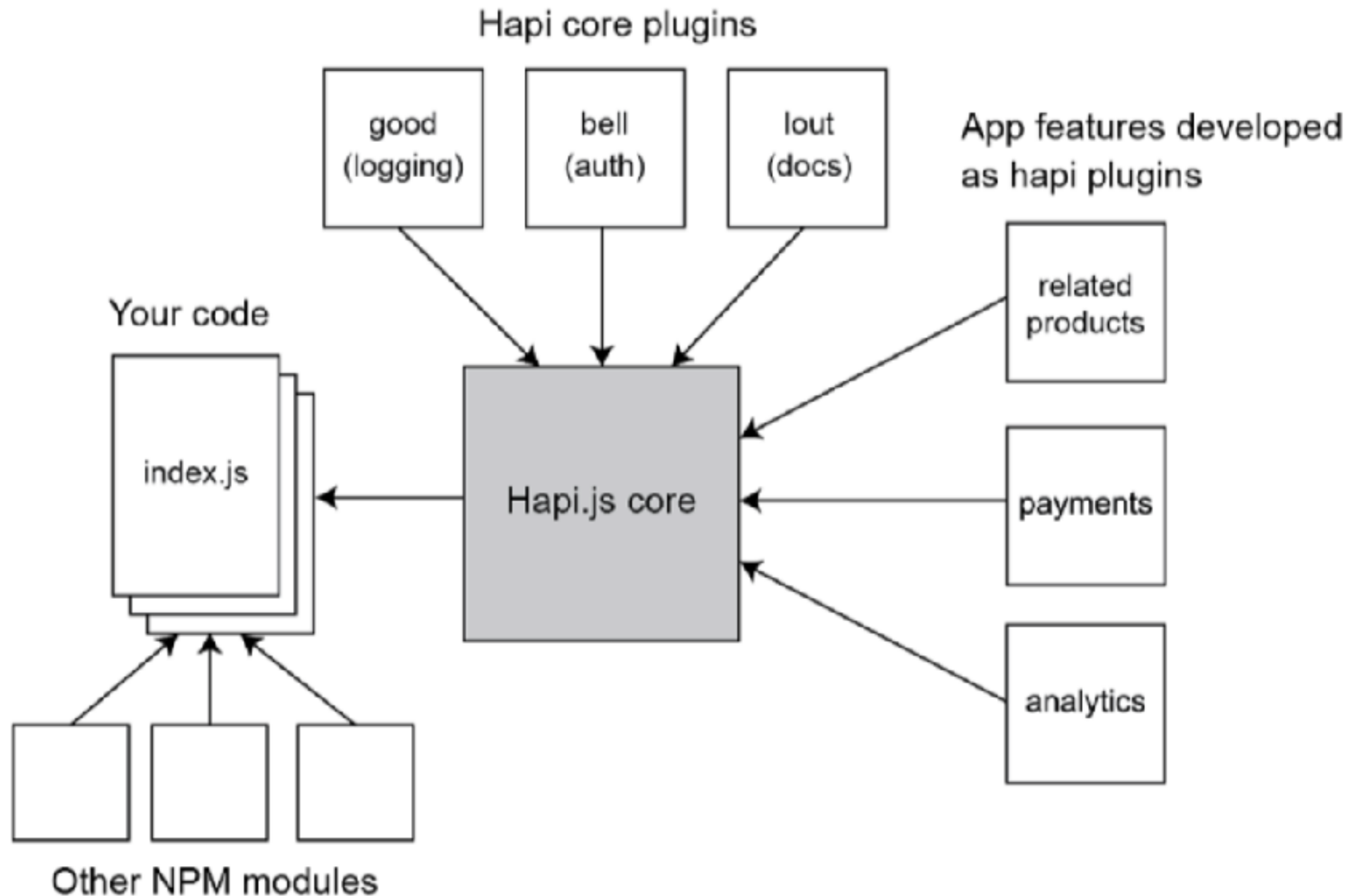
Micro Frameworks
- Lightweight

Hapi Approach



1. Small framework with few components
2. Frameworks core functionality extended with configurable official plugins
3. Application is independent of framework
4. Application relies on 3rd party libraries

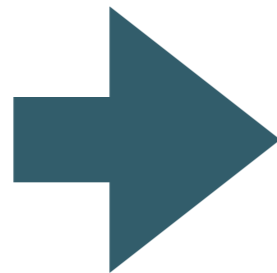
Example Hapi Application Structure



Hapi Plugins

<https://hapijs.com/plugins>

- Categories of plugins



Authorization

Authentication

Documentation

Encoding

Localization/Internationalization

Logging/Metrics

Messaging

Security

Session

Templating

Utility

Validation

The extended hapi universe



The extended hapi universe

- **boom**
HTTP-friendly error objects
- **inert**
Static file and directory handlers
- **joi**
Object schema description language and validator for JavaScript objects
- **vision**
Templates rendering support
- **wreck**
HTTP Client utilities

Authentication

- [hapi-auth-cookie](#)
A cookie-based session authentication scheme
- [hapi-auth-jwt2](#)
Simplified JSON Web Token (JWT) authentication plugin

Utilities

- **hapi-mongoose**

A lightweight mongoose connection and configuration plugin for Hapi 9+

<http://nodeframework.com/>

Hand-picked registry of Node.js frameworks.

30+ libraries and counting.



MVC



Full-stack



REST API



Others

▾ [Learn more](#)

node 

npm

JS

MVC frameworks




















Sinatra-like

These frameworks offer rich configuration and are less opinionated than Rails-like or full-stack.

- ✓ [Express](#)  Star 
- ✓ [hapi](#)  Star  8,358 
- ✓ [flatiron](#)  Star  1,337 
- ✓ [locomotive](#)  Star  663 
- ✓ [total.js](#)  Star  3,365 
- ✓ [koa.js](#)  Star  17,509 
- ✓ [TWEE.IO](#)  Star  116 
- ✓ [diet.js](#)  Star  349 
- ✓ [Flicker.js](#)  Star  12 

















































Rails-like

Present your project properly. Create your own art from included templates

- ✓ [Nodal](#)  Star  4,452 
- ✓ [CompoundJS \(former railwaysjs\)](#)  Star  1,654 
- ✓ [geddy](#)  Star  1,909 
- ✓ [Sails.js](#)  Star  17,808 
- ✓ [Adonis](#)  Star  2,724 
- ✓ [RhapsodyJS](#)  Star  63 
- ✓ [Strapi](#)  Star 
- ✓ [ThinkJS](#)  Star  3,617 
- ✓ [Trails](#)  Star  1,641 
- ✓ [KambojaJS](#)  Star  16 

Full-stack frameworks

That's where Node.js really shines. The full-stack MVC frameworks are bundled with scaffolding, template engines, websocket and persistence libraries to allow you build real-time scalable web apps.

- ✓ Catberry.js  Star 744 
- ✓ AllcountJS  Star 380 
- ✓ Derby  Star 4,200 
- ✓ Feathers  Star 7,448 
- ✓ SocketCluster  Star 4,182 
- ✓ SocketStream  Star 3,520 
- ✓ MEAN.js  Star 4,331 
- ✓ MEAN.io  Star 10,340 
- ✓ Meteor  Star 38,270 
- ✓ Meatier  Star 3,024 
- ✓ TWEE.IO  Star 116 
- ✓ Mojito  Star 
- ✓ Seeds.js  Star 71 
- ✓ SANE  Star 
- ✓ COKE  Star 122 
- ✓ Sleekjs  Star 98 
- ✓ Danf  Star 53 
- ✓ Catberry  Star 744 
- ✓ Nuke.js  Star 22 
- ✓ We.js  Star 183 
- ✓ seneca.js  Star 2,514 
- ✓ Keystone.js  Star 10,992 
- ✓ Horizon  Star 6,637 
- ✓ Apogeu  Star 51 

REST API frameworks

For those who use rich-client/front-end MVC frameworks (or not) and just need to spin up a fast Node.js REST API server.

Ivy 6

Restocat 10

actionHero.js

Frisby 1,053

restling 54

restify

restmvc 160

percolator 121

LoopBack 9,813

Fortune.js

facet 0

Raddish 3

Restberry

Gugamarket 17



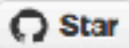



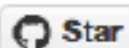

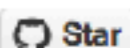

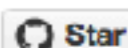
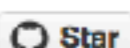

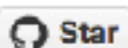



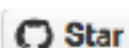


Nest

microlet 0

Moleculer 374

Other libraries

Middleware, libraries and static site generators.

- ✓ [Connect](#)  7,443 
- ✓ [Kraken](#)  4,419 
- ✓ [ewdGateway2](#)  30 
- ✓ [Wintersmith](#)  3,223 
- ✓ [docpad](#)  
- ✓ [Blacksmith](#)  
- ✓ [romulus](#)  
- ✓ [Petrify](#)  
- ✓ [Tower.js](#)  
- ✓ [Impress](#)  
- ✓ [Rendr](#)  
- ✓ [Backnode](#)  
- ✓ [Sequelize](#)  
- ✓ [Cylon.js](#)  
- ✓ [Virgilio.js](#)  
- ✓ [SHPS](#) 