JavaScript, Node.js apps and Exponential

Moving between Exponential 6 and JavaScript applications - Next.js and other static or server-rendered front ends, headless setups, Markdown and MDX content in a repository - including using Exponential as the content...

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A JavaScript site is a front end; its content lives somewhere else: in Markdown or MDX files in the repository, in a headless CMS, in a database behind an API, or inside the code. So "migrating a Next.js site" means two decisions: **where the content goes** (into Exponential), and **what renders the site** (Exponential's templates, or the existing front end reading Exponential).

Migration hub · Checklist · Mapping · Tools

Contents

- 1. Where the content of a JavaScript site lives
- 2. Content into Exponential
- 3. Keeping the JavaScript front end: Exponential as its content source
- 4. Addresses and redirects
- 5. From Exponential to a JavaScript front end
- 6. Checklist

1. Where the content of a JavaScript site lives

Content source	How to read it
Markdown or MDX files (blogs, documentation sites)	the files themselves: front matter (YAML) plus body
A headless CMS (Contentful, others)	that CMS's export or API; for Contentful see Contentful
JSON or YAML data files	the files
A database behind the app's own API	the API, or the database directly (other applications)
Hard-coded in components	the rendered HTML (crawl, static HTML)

Next.js stores no content of its own. According to its documentation, `output: 'export'` makes `next build` write static HTML, CSS and JavaScript to `out/` (`next export` was removed in version 14). That output is a complete crawl target for the static HTML method when the sources are hard to read.

2. Content into Exponential

1. **Collect the sources**: list the content directories, data files and APIs the app reads at build or request time (look at `getStaticProps`/`generateStaticParams`, loaders, or the data layer of your framework).

2. **Convert Markdown/MDX**: in Node.js, parse the front matter and render Markdown to HTML with the library the site already uses, so the result matches what visitors saw. MDX components (`<Callout>`, `<Video>`) have no HTML equivalent: map each to an Exponential custom tag or embed, or render it to plain HTML.
3. **Write JSON rows**: remote id from the file path or slug (`md-blog/2024/hello`), title, date, tags, author, the HTML, the route.
4. **Import** with the script skeleton on the server, or xrowextract's importer with `--map`. Media from `public/` become image/file objects.
5. **Templates**: build TPL templates, or keep the front end (3).

3. Keeping the JavaScript front end: Exponential as its content source

Exponential can be the headless content source of an existing front end; editors work in the Exponential admin, the front end fetches content at build or request time.

Interface	Use	Reference
REST v1/v2 (`ezprestapi`)	read nodes, children and fields as JSON: GET `/api/ezp/v2/content/node/<id>`, `.../list/offset/<n>/limit/<n>`, `?ResponseGroups=Fields`, `?OutputFormat=xhtml` for the rendered body	REST API v1 and v2
Personal API keys	a build server reads with `Authorization: Bearer expk_...`, limited to the key's scopes and the owner's policies	Personal API keys
OAuth2	an app that acts for signed-in users	the REST guide, section 3.1
`expservices`	the admin's functions as named HTTP services (content, users, media, tags, layouts ...)	Remote services and apps

Writes over REST are limited (create and delete at v2; update answers 501 for now), so bulk imports are done on the server, not from the front end.

4. Addresses and redirects

- Keep the routes: give each node the alias of its old route, so the front end (or Exponential's own templates) can serve the same paths.
- According to the Next.js documentation, a static export does **not** support `redirects`, `rewrites` or `headers` from `next.config.js`, nor Route Handlers that use the request, ISR, Server Actions or default image optimization: redirects of a statically exported site belong to the host or web server.
- When Exponential renders the site, the redirects are URL aliases and wildcards (checklist, 4).

5. From Exponential to a JavaScript front end

- **Keep Exponential as the content source** and build the new front end against its REST API (3).

- **Or move the content out**: export with xrowextract to JSON (leaving Exponential), render XmlText to HTML or Markdown, and write the files or the headless CMS of your choice.
- Image aliases (scaled renditions) are produced by Exponential; a static site needs its own image pipeline.

6. Checklist

☐ Every content source of the app listed (files, data, APIs, hard-coded).

☐ Markdown rendered with the site's own renderer; MDX components mapped.

☐ Imported with remote ids from paths or slugs; media imported.

☐ Decision made: Exponential templates, or the front end reading Exponential (API key scopes set).

☐ Routes preserved or redirected on the host.

Sources

- Next.js static exports: https://nextjs.org/docs/app/guides/static-exports

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