

Rendering

By default, Next.js **pre-renders** every page. This means that Next.js generates HTML for each page in advance, instead of having it all done by client-side JavaScript. Pre-rendering can result in better performance and SEO.

Each generated HTML is associated with minimal JavaScript code necessary for that page. When a page is loaded by the browser, its JavaScript code runs and makes the page fully interactive (this process is called [hydration](#) [↗] in React).

Pre-rendering

Next.js has two forms of pre-rendering: **Static Generation** and **Server-side Rendering**. The difference is in **when** it generates the HTML for a page.

- Static Generation: The HTML is generated at **build time** and will be reused on each request.
- Server-side Rendering: The HTML is generated on **each request**.

Importantly, Next.js lets you choose which pre-rendering form you'd like to use for each page. You can create a "hybrid" Next.js app by using Static Generation for most pages and using Server-side Rendering for others.

We recommend using Static Generation over Server-side Rendering for performance reasons. Statically generated pages can be cached by CDN with no extra configuration to boost performance. However, in some cases, Server-side Rendering might be the only option.

You can also use client-side data fetching along with Static Generation or Server-side Rendering. That means some parts of a page can be rendered entirely by clientside JavaScript. To learn more, take a look at the [Data Fetching](#) documentation.

Use Server-side Rendering to render pages on each request.

Static Site Generation (SSG)

Use Static Site Generation (SSG) to pre-render pages at build time.

Incremental Static Regeneration (ISR)

Learn how to create or update static pages at runtime with Incremental Static Regeneration.

Automatic Static Optimization

Next.js automatically optimizes your app to be static HTML whenever possible. Learn how it works here.

Client-side Rendering (CSR)

Learn how to implement client-side rendering with Next.js.

Edge and Node.js Runtimes

Learn more about the switchable runtimes (Edge and Node.js) in Next.js.