

The background of the slide features a wide-angle photograph of a natural landscape. In the foreground, there's a grassy hillside with patches of yellow flowers. A dirt path winds its way up the hill from the bottom right. In the middle ground, a large, turquoise-blue lake stretches across the frame. Beyond the lake, a range of mountains with snow-capped peaks rises against a bright blue sky with scattered white clouds.

NILS HARTMANN

<https://nilshartmann.net>

Mastering
React
with **TanStack**
Router and **Query**

IJS LIVE EVENT | ONLINE, FEBRUARY 25, 2025 | @NILSHARTMANN

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Java, Spring, GraphQL, React, TypeScript



<https://graphql.schule/video-kurs>

<https://reactbuch.de>

HTTPS://NILSHARTMANN.NET

TanStack

<https://tanstack.com/>



TANSTACK

**High-quality open-source
software for web developers.**

Headless, type-safe, & powerful utilities for Web Applications, Routing, State Management, Data Visualization, Datagrids/Tables, and more.

TanStack Query

(formerly known as React Query)

<https://tanstack.com/query/latest>

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All-inclusive Data Fetching solution for React (and others)

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Suspense, Caching, TypeSafety, Error Handling

TanStack Router

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Filebased, typesafe Routing

TanStack Router

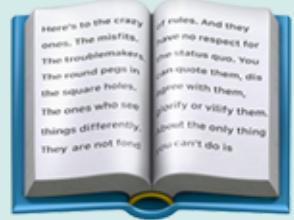
<https://tanstack.com/router/latest>

Filebased, typesafe Routing

Search Params as global State

Code Examples

(You get the link to the code later)



Lazy Routes

- 🕵️ about.lazy.tsx ↗
- 🕵️ __root.tsx: Add Link
- 🕵️ Network traffic

Typesafe Routes

-  \$bookId/index.tsx
-  <Link> in BookList.tsx
-  Show \$bookId useParams bri

Loading data with suspense

- 🕵️ book-query.ts
- 🕵️ \$bookId/index.tsx

Pending state

-  book-query.ts - slowdown
-  \$bookId/index.tsx - pendingComponent

Validation using zod

-  book-types.ts: add zod
-  book-query.ts – TBookDetails.parse

Router: State as search params

- 🕵️ books/index.tsx – define search params
- 🕵️ BookmarkButton.ts – consume search params
- 🕵️ event-store.ts – enabledLogEvents = ["Rendered"]

Query cache

- 🕵️ add 40_query_cache/00_material
- 🕵️ BookDetails.tsx add <ReviewLink />
- 🕵️ ReviewLink.tsx implement
- 🕵️ reviews/index.tsx: Load book data
- 🕵️ What is happening when on the network? What is happening in the cache?
 - Navigate from bookId -> reviews
 - Reload reviews

Router: Early loading

- 🕵️ add 45_before_load/00_material with route.tsx
- 🕵️ Implement route.tsx
- 🕵️ What is happening when on the network? What is happening in the cache?
 - Navigate from bookId -> reviews
 - Reload reviews
 - Still slow, but Requests in parallel
 - There are other ways to achieve the same

Mutations

- 🕵️ Remove slowdown in bookByIdQueryOpts
- 🕵️ __root.tsx: enable BookOfTheMonth
- 🕵️ BookOfTheMonth: Load book
 - Note: again the queryOpts
 - Note: again it's coming from the cache
- 🕵️ Enable LikeButton in BookDetails
- 🕵️ like-mutation: implement mutation
- 🕵️ LikeButton: implement mutation

Summary

Should I use it?

SUMMARY

TanStack Query

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Seems to be de-facto standard nowadays

(often in combination with zod)

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I really like it and would use it in almost all cases

(Exceptions: GraphQL, Redux)

SUMMARY

TanStack Router

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Would I use it? Probably, but...

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Very active development (can be hard to keep up)

TanStack Router

Would I use it? Yes!

But keep in mind...

Very active development (can be hard to keep up)

Not as widely used (as React Router)

DEMO

Example application

Source-Code and Slides:

<https://react.schule/ijs-tanstack-live>

Thank you very much!

Slides & Code: <https://react.schule/ijs-tanstack>

Questions and contact:

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<https://nilshartmann.net/contact>

