

RouteParamsFactory

August 17, 2026

RouteParamsFactory

Kind: Class

Source: `packages/core/router/route-params-factory.ts`

Part of: `Core`

`RouteParamsFactory` resolves a configured route-parameter key into its corresponding typed value. It centralizes route parameter exchange logic so router consumers can safely retrieve values while handling missing parameters through a `null` result.

Implements: `IRouteParamsFactory`

Methods

Method	Signature	Returns
<code>exchangeKeyForValue</code>	<code>`exchangeKeyForValue(key: RouteParamtypes</code>	<code>string, data: string, { req, res, next }:</code> <code>{ req: TRequest; res: TResponse;</code> <code>next: Function })`</code>

Diagram

```
graph LR
  A[Route definition / parameter mapping] --> B[RouteParamsFactory]
  C[Current route parameters] --> B
  B --> D[exchangeKeyForValue<TResult>()]
  D --> E[Typed parameter value]
  D --> F[null when no matching value exists]
```

Usage

```
import { RouteParamsFactory } from "@your-package/core/router";

function loadUser(routeParamsFactory: RouteParamsFactory) {
```

```
const userId = routeParamsFactory.exchangeKeyForValue<string>();

if (userId === null) {
  throw new Error("A user route parameter is required.");
}

return fetch(`/api/users/${encodeURIComponent(userId)}`);
}
```

AI Coding Instructions

- Treat `exchangeKeyForValue()` as a nullable lookup; always handle the `null` case before using the returned value.
- Provide the expected result type through the generic parameter when the route value needs to be treated as a specific type.
- Keep route-key mapping and parameter exchange logic inside `RouteParamsFactory` rather than duplicating lookup behavior in route handlers.
- Ensure the route definition and the factory's configured parameter mapping stay aligned when renaming route parameters.

How it works

RouteParamsFactory

`RouteParamsFactory` is a class implementing `IRouteParamsFactory`; its `exchangeKeyForValue` method maps a route-parameter type and optional `data` key to a value from `{ req, res, next }`. [route-params-factory.ts:4-13](#) The router constructs one instance and passes it to `RouterExecutionContext`; that context creates extraction functions which call this method with the request, response, and next callback. [router-explorer.ts:78-98](#) [router-execution-context.ts:315-326](#)

Relationships

- IMPORTS → `RouteParamtypes`