

ForwardReference

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ForwardReference

Kind: Interface

Source: `packages/common/interfaces/modules/forward-reference.interface.ts`

Part of: [Common](#)

`ForwardReference<T>` is a lightweight wrapper interface used to defer access to a value until it is needed. It is typically used to resolve circular dependencies between modules, providers, or other components that cannot be referenced directly during initial declaration.

Properties

Property	Type
<code>forwardRef</code>	<code>T</code>

Diagram

```
graph LR
  A["A[Module or Provider A]"] --> B["B[ForwardReference<T>]"]
  B --> C["C[forwardRef: T]"]
  C --> D["D[Deferred Module or Provider B]"]
  D -. "circular dependency" .-> A
```

Usage

```
import type { ForwardReference } from './forward-reference.interface';

interface UserModule {
  name: string;
}
```

```
const userModuleReference: ForwardReference<UserModule> = {
  forwardRef: {
    name: 'UserModule',
  },
};

// Resolve the deferred reference when needed.
const userModule = userModuleReference.forwardRef;

console.log(userModule.name); // "UserModule"
```

AI Coding Instructions

- Use `ForwardReference<T>` when a dependency must be declared before its final value can be resolved, especially for circular module relationships.
- Keep the generic type `T` specific so consumers receive accurate type inference for `forwardRef`.
- Access the wrapped dependency through the `forwardRef` field rather than treating the wrapper itself as the referenced value.
- Do not add unrelated metadata to this interface; it should remain a minimal, typed reference wrapper.
- Ensure code that consumes a forward reference resolves `.forwardRef` at the appropriate integration boundary.

Used by

8 references from 8 files. Each is a place in this repository where the symbol is actually used — go read one rather than trusting an example.

Imported by (8)

- `ClientsModule` — `packages/microservices/module/clients.module.ts` :17
- `ModuleFactory` — `packages/core/injector/compiler.ts` :8
- `InjectorDependency` — `packages/core/injector/injector.ts` :51
- `ByReferenceModuleOpaqueKeyFactory` — `packages/core/injector/opaque-key-factory/by-reference-module-opaque-key-factory.ts` :10
- `ModuleOpaqueKeyFactory` — `packages/core/injector/opaque-key-factory/interfaces/module-opaque-key-factory.interface.ts` :5
- `ModuleDefinition` — `packages/core/interfaces/module-definition.interface.ts` :4
- `IEntryNestModule` — `packages/core/nest-factory.ts` :39

- `DependenciesScanner` — `packages/core/scanner.ts` :75