Common Pitfalls and Challenges

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Overview

One implementing type, two service types

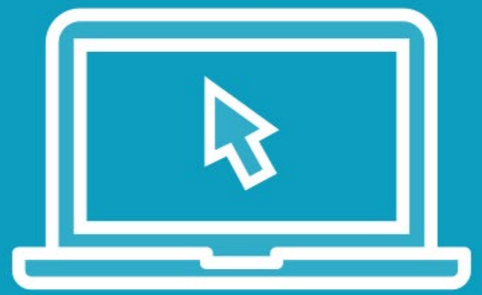
Hanging state

Expensive dependencies

Constructor parameters

IDisposable

Demo

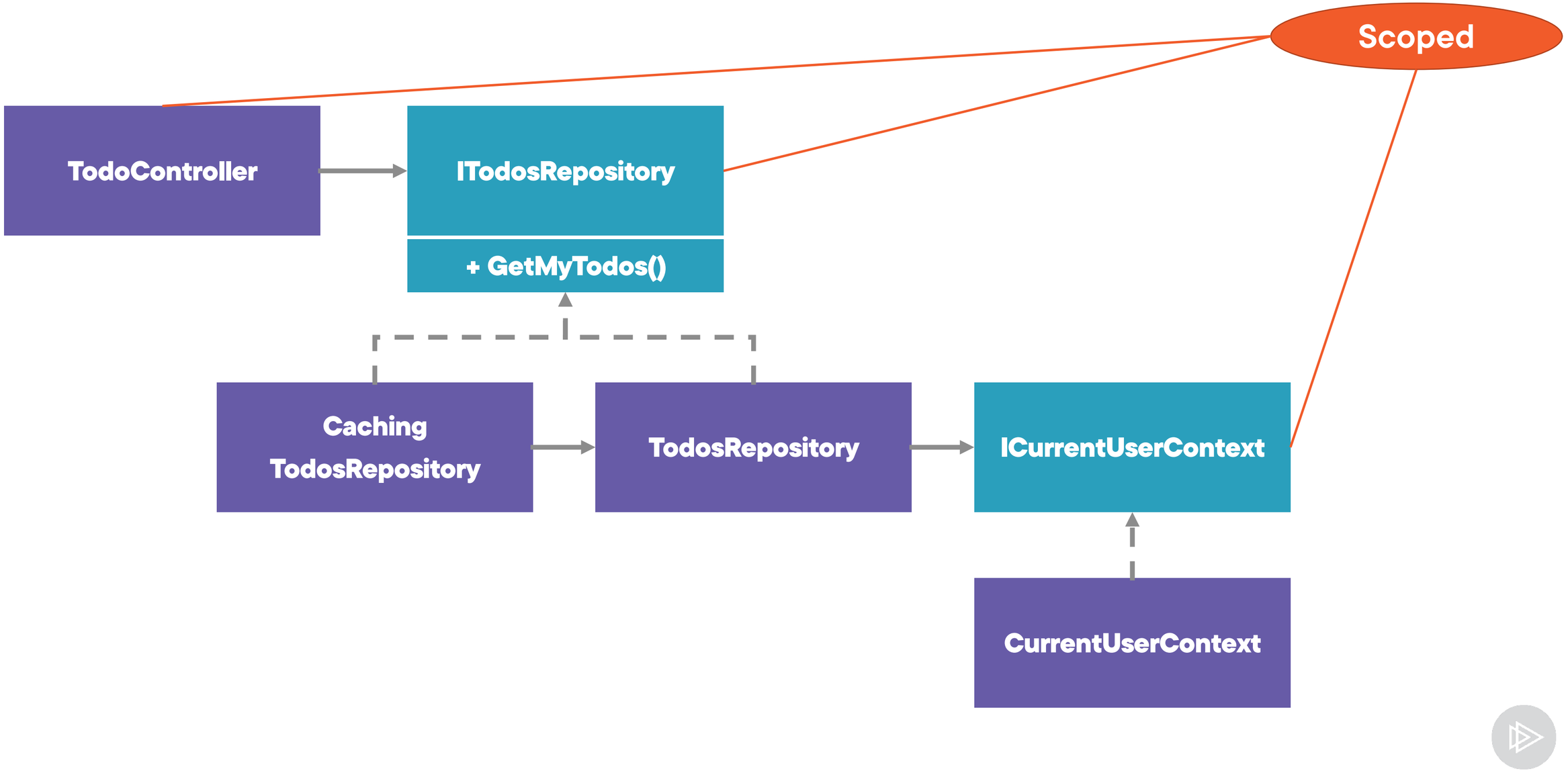


Reusing the same implementing type for multiple service types

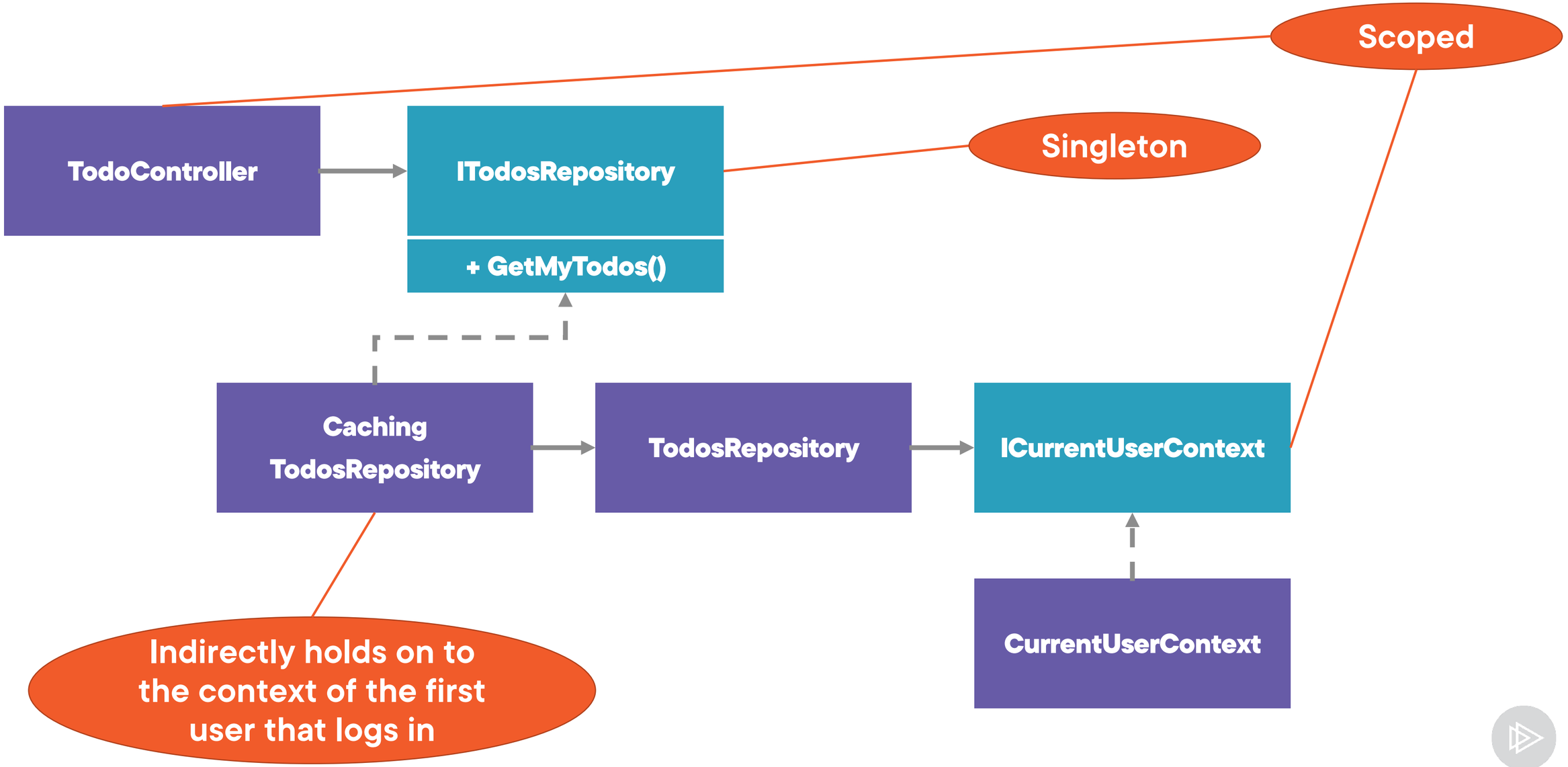
Lifetimes are coupled to the service type, the implementing type

Hanging State Due to Lifetime Issues

A Repository Pattern Implementation

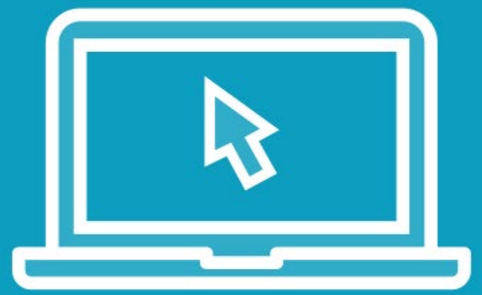


A Repository Pattern Implementation



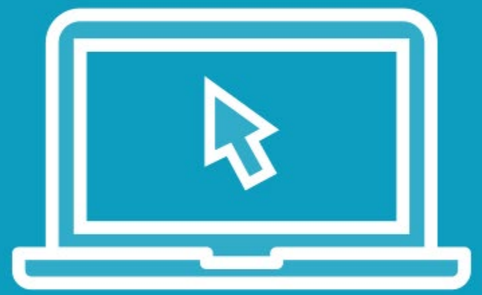
Hanging state is often caused by dependency captivity

Demo



Dealing with dependencies that are expensive to instantiate

Demo



Dependency constructor parameters that are known only after constructing the depending class

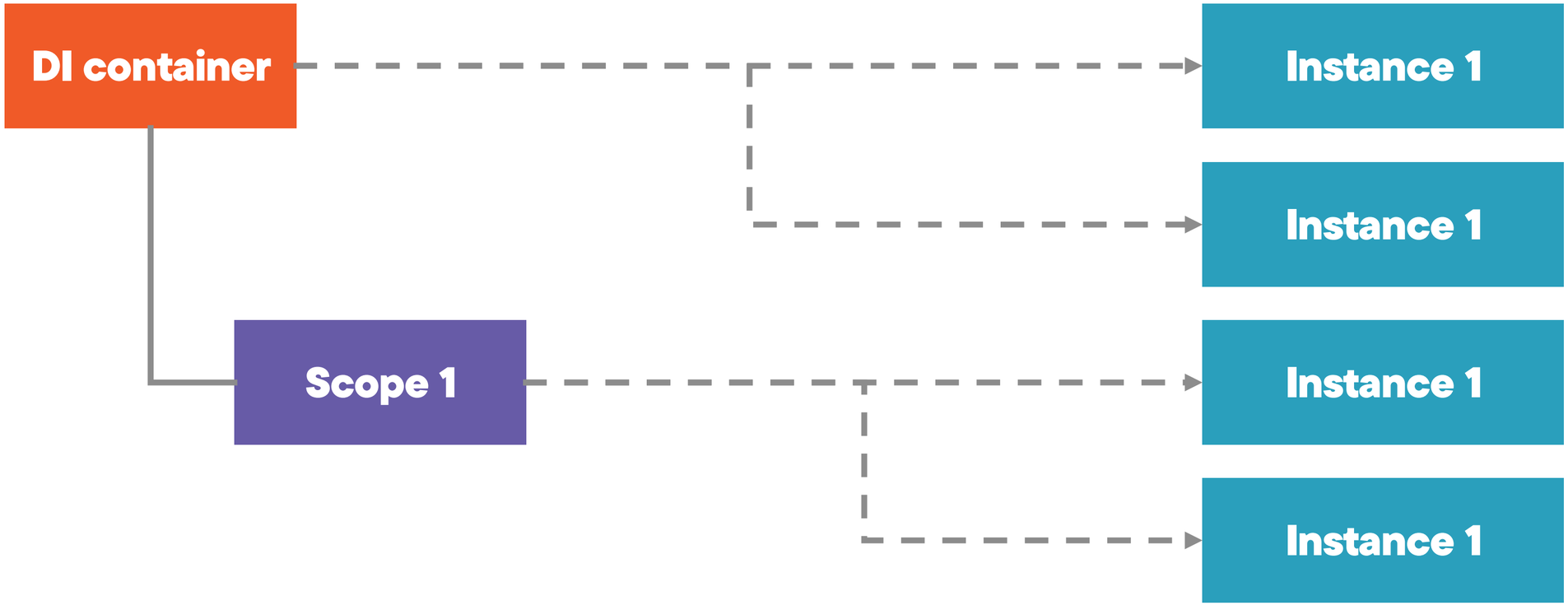
Dependency Injection and IDisposable

Who creates, also disposes

The DI container creates types on demand, so the DI container is also responsible for disposing them

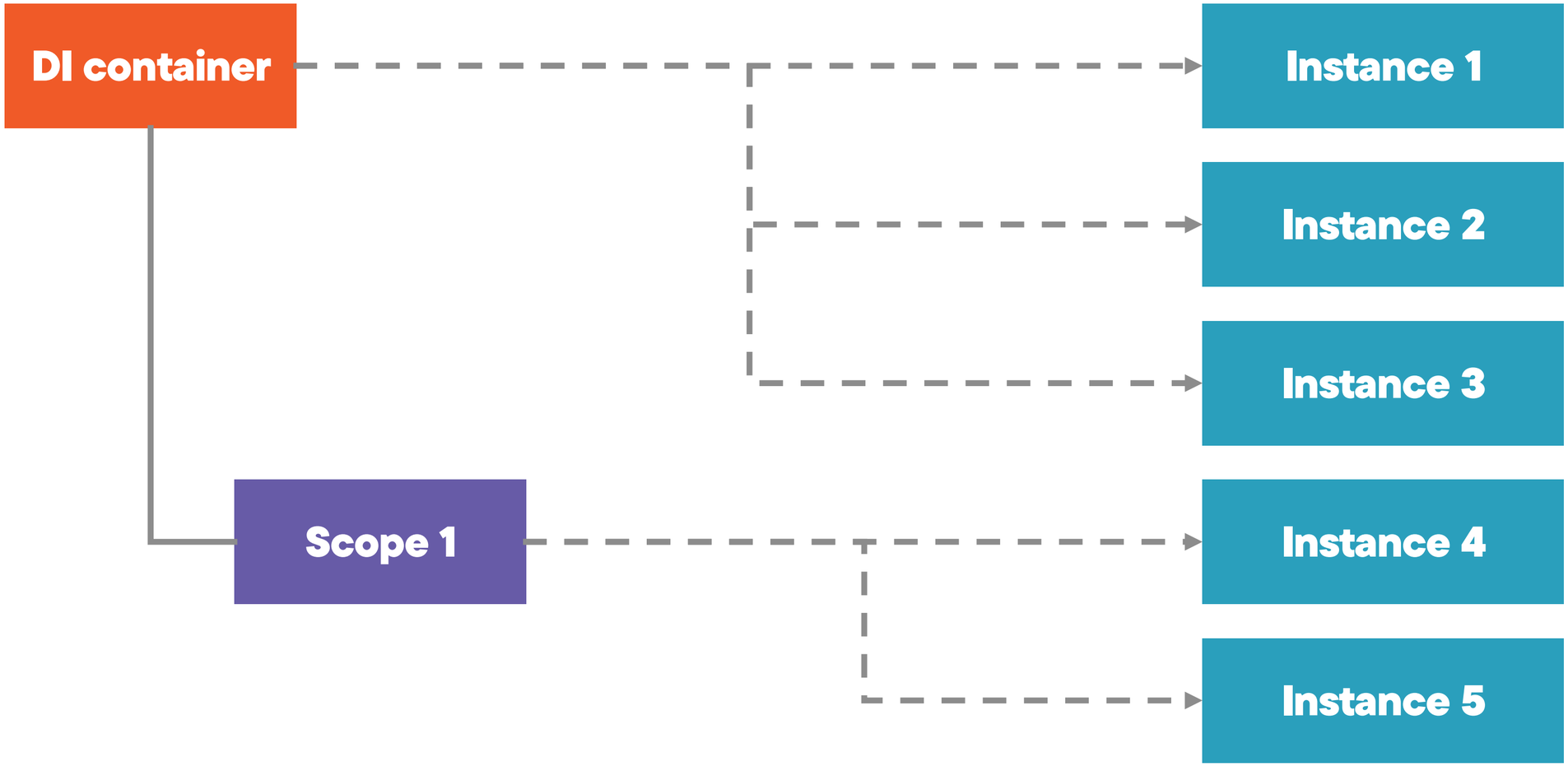
All created types are disposed when the container or scope is disposed

IDisposable and Singleton



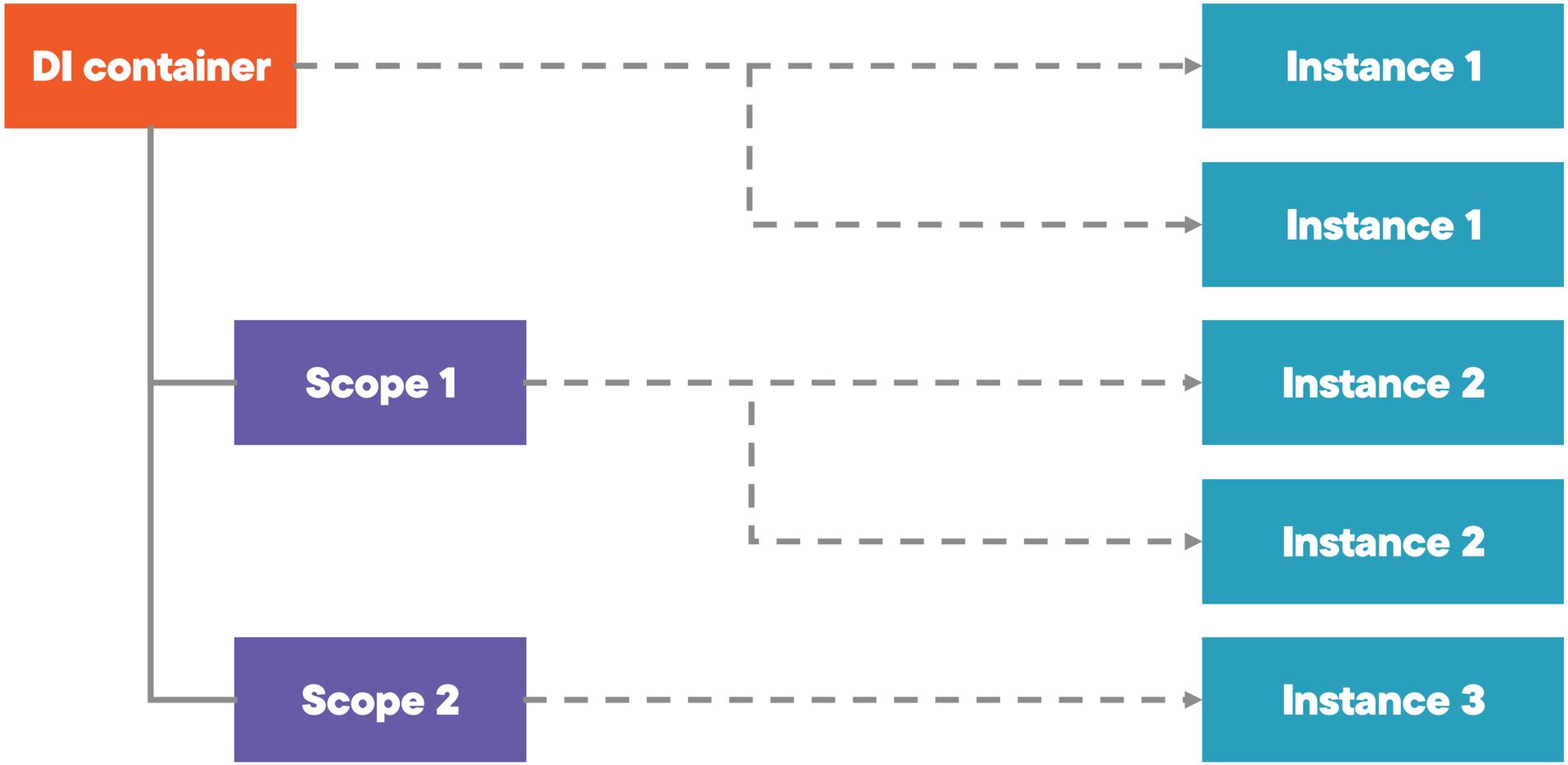
All good! Only one instance, and it is disposed when the container is disposed

IDisposable and Transient



More and more transient types are created, but disposed only much later when the container or scope is disposed

IDisposable and Scoped



Scoped lifetimes resolved on a scope are disposed when the scope is disposed

The instance associated with the root container is never disposed

Dos and Don’ts

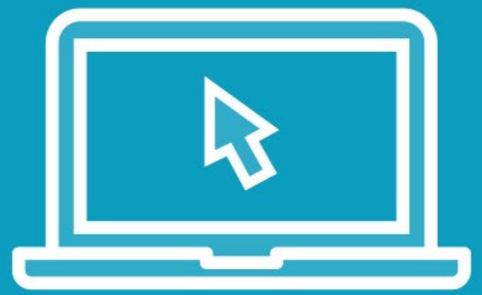
Do implement IDisposable in your classes as needed

Don’t register IDisposable types as transient, instead instantiate them using a factory

Don’t resolve IDisposable types in the root container

Avoid (custom) scopes and scoped IDisposables when you can

Demo



Dependency Injection and IDisposable

Summary

- Implementing multiple service types
- Hanging state
- Deferring construction
- Working with constructor parameters that can’t be injected
- IDisposable: Dos and Don’ts

Up Next:
Advanced Techniques