

Mapping and Using One-to-one Relationships



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Module Overview



Review existing one-to-one relationship

Understand how EF Core infers one-to-one mappings

Learn how to affect the mappings

Adding the child entity in a one-to-one

Removing or replacing the child entity



Understanding One-to-one Mappings



A Samurai Can Have a Secret Identity

```
public class Samurai
{
    public Samurai()
    {
        Quotes = new List<Quote>();
        SamuraiBattles = new List<SamuraiBattle>();
    }
    public int Id { get; set; }
    public string Name { get; set; }
    public List<Quote> Quotes { get; set; }
    public List<SamuraiBattle> SamuraiBattles { get; set; }
    public SecretIdentity SecretIdentity { get; set; }
}
```

```
public class SecretIdentity
{
    public int Id { get; set; }
    public string RealName { get; set; }
    public int SamuraiId { get; set; }
}
```



One-to-one Mapping Rules

Must be able to infer principal (parent) & dependent (child)

Relational database requires a FK in the dependent table

EF Core can map easily if dependent class has an FK property

If FK property doesn't follow convention, you can configure

Optional/Required parent depends on FK nullability





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EF Core Cannot Require a Dependent

Dependent will always be optional

EF Core (& database) will always allow a null child

To enforce a required dependent:

You'll need to handle the requirement in your business logic



Mapping One-to-one Without a Foreign Key



A photograph of a sandy beach with several long, dark shadows cast across the sand. The shadows appear to be of people standing, and the sand has a rippled texture. The lighting is bright, creating high contrast between the dark shadows and the light sand.

Shadow Properties

Adding Children to One-to-one Relationships



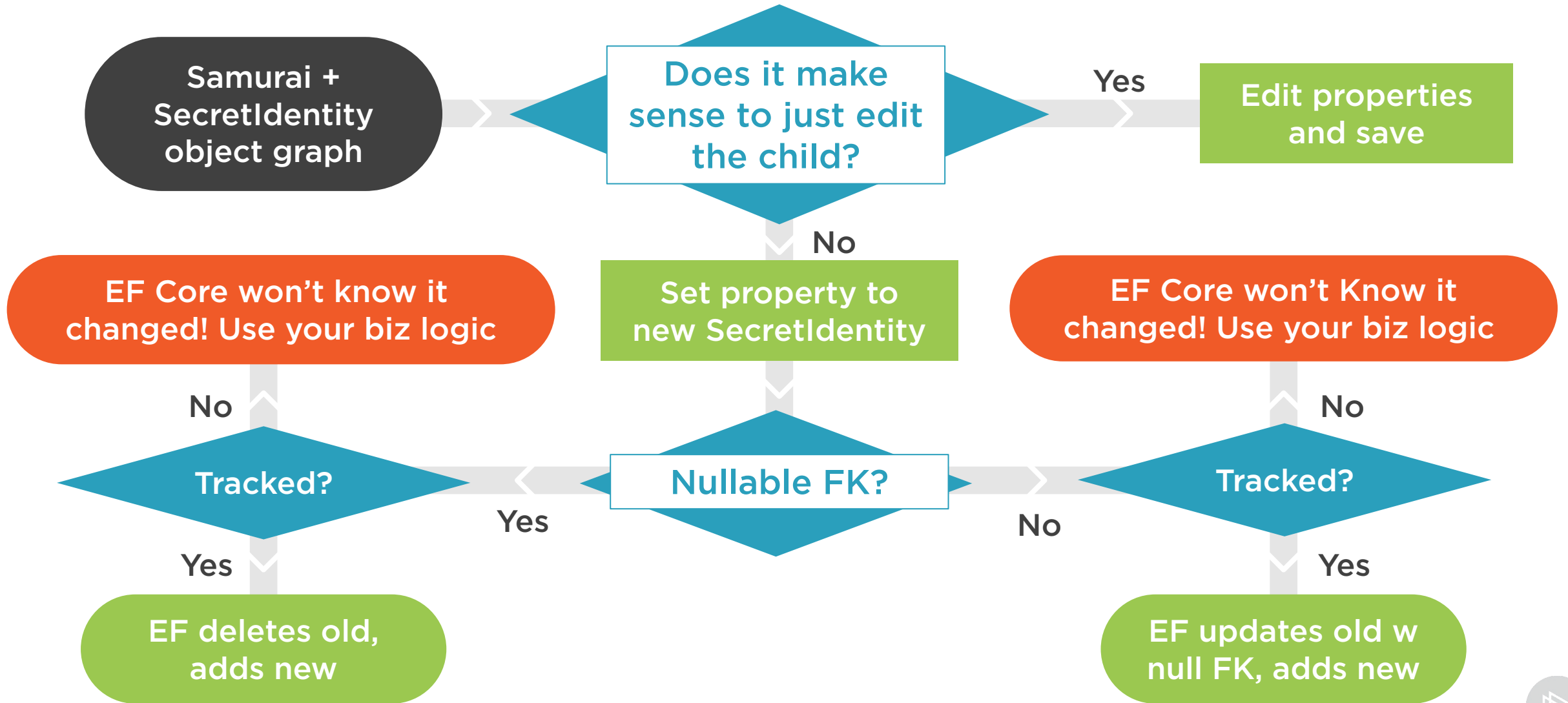
Replacing Children in One-to-one Relationships



Changing the Child of an Existing Parent

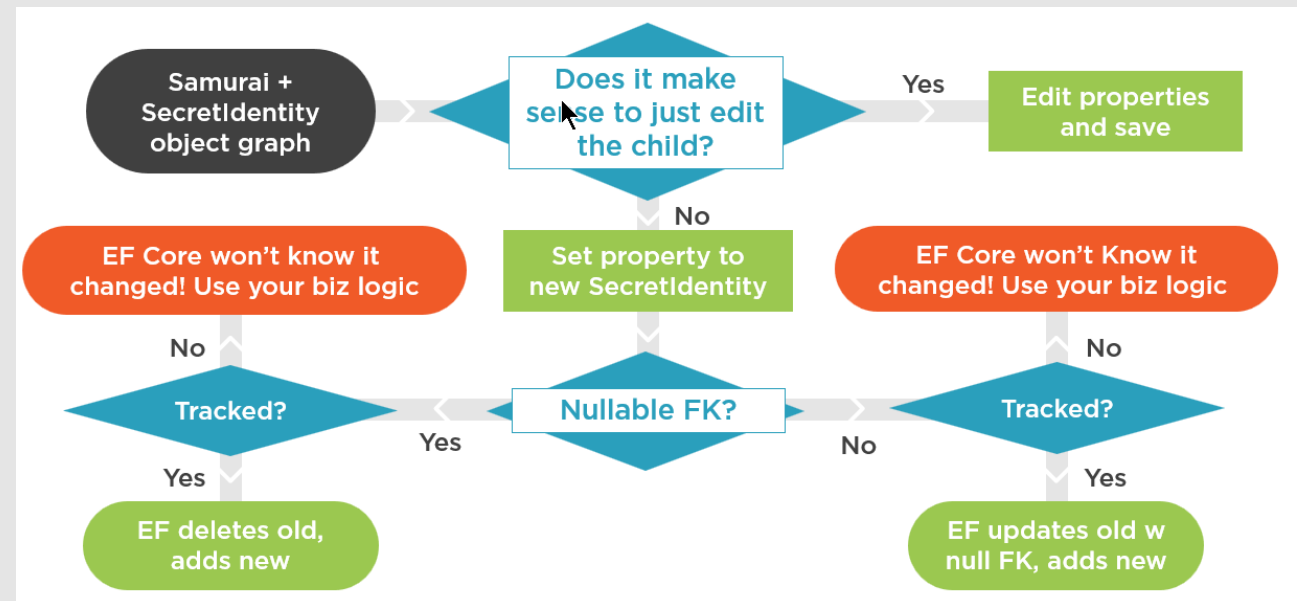
- ✓ Is foreign key nullable?
- ✓ Is the child object in memory?
- ✓ Are the objects being tracked?

Changing the Child of an Existing Parent



Changing the Child of an Existing Parent

- ✓ Is foreign key nullable?
- ✓ Is the child object in memory?
- ✓ Are the objects being tracked?



Review

EF Core convention infers most common scenario

Mappings are easier with FK properties

You can always control the mapping with Fluent API

A child can exist without a parent but ..

EF Core can't force a child to be required

Nullability of FK property affects behavior

Whether or not entities are being tracked affect the behavior

Resources

Entity Framework Core on GitHub github.com/aspnet/entityframework

EF Core Roadmap bit.ly/efcoreroadmap

EF Core Documentation docs.microsoft.com/ef

[Pluralsight] Entity Framework Core 2: Getting Started bit.ly/PS_EFCore2

Announcing Entity Framework Core 2.0 bit.ly/EFCore2RTM

Data Points - DDD-Friendlier EF Core 2.0 msdn.microsoft.com/magazine/mt842503



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