

# Using EF6 in Your Applications



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# In This Module



Adding Some Real World Flair to the Model

Using the Model in a WPF Application

Encapsulating Data Access in Unique Classes

Using the Model in an ASP.NET MVC Web Site

Considerations for Disconnected Applications

Using the Model in an ASP.NET Web API

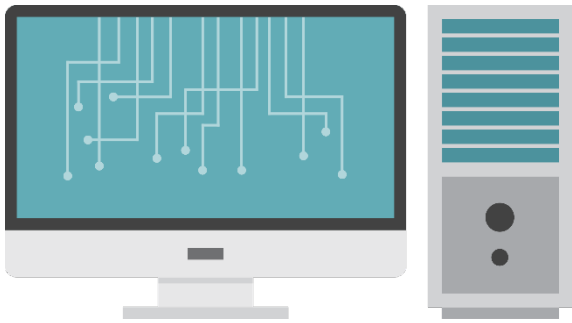
Consuming the Web API in an Aurelia Web Site

Adding a  
Bit of  
**Real World Flair**  
to our Model

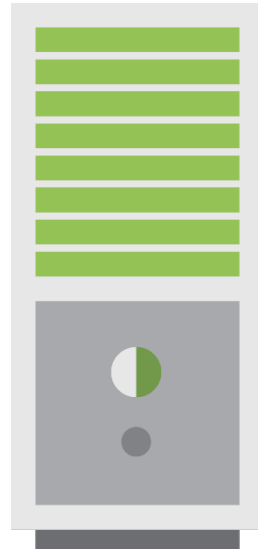
# **The Code Driving the WPF Application**

# Using the Ninja Model in an **ASP.NET MVC Application**

# Client Application



- Application
- EF/DbContext
- Optional: Database

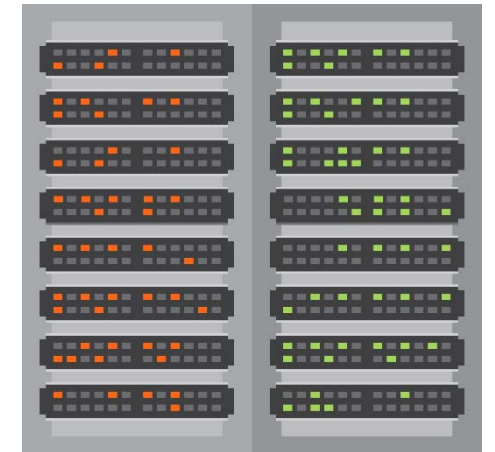


Or  
Network  
Database

# Disconnected Application



- Application
- Web App



- Services/API
- EF/DbContext
- Data

## Index

[Create New](#)

Name	ClanName	ServedInOniwaban	DateOfBirth	DateCreated	DateModified	
Kacy Catanzaro	American Ninja Warriors	<input type="checkbox"/>	01/14/90	07/15/15	07/15/15	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
JulieSan	Vermont Clan	<input checked="" type="checkbox"/>	01/01/80	07/15/15	07/15/15	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
SampsonSan	Vermont Clan	<input type="checkbox"/>	01/28/08	07/15/15	07/15/15	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Leonardo	Turtles	<input type="checkbox"/>	01/01/84	07/15/15	07/15/15	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Raphael	Turtles	<input type="checkbox"/>	01/01/85	07/15/15	07/15/15	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

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### Details

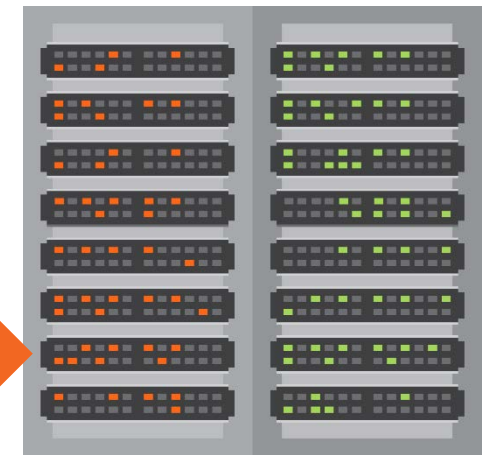
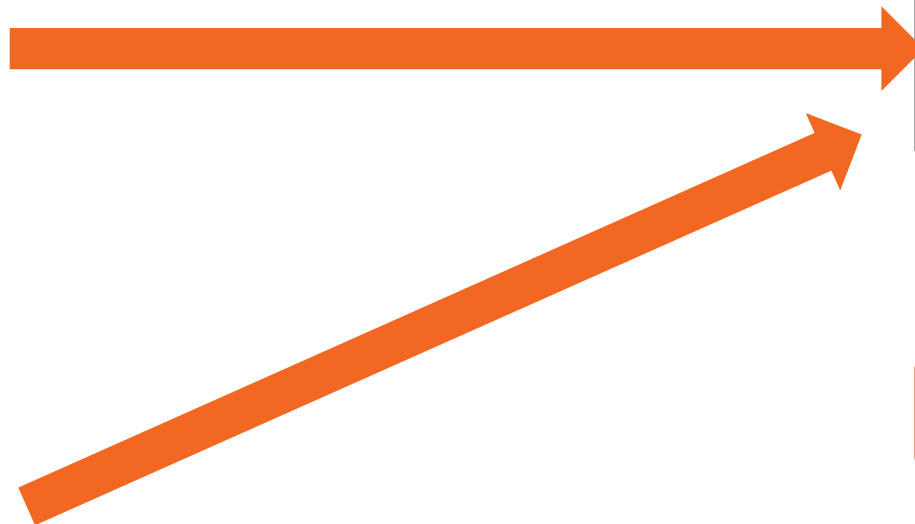
Ninja

ClanName: American Ninja Warriors  
Name: Kacy Catanzaro  
ServedInOniwaban: ☐  
DateOfBirth: 01/14/90

Name	Type
Muscles	Tool
Spunk	Weapon

DateCreated: 07/15/15  
DateModified: 07/15/15

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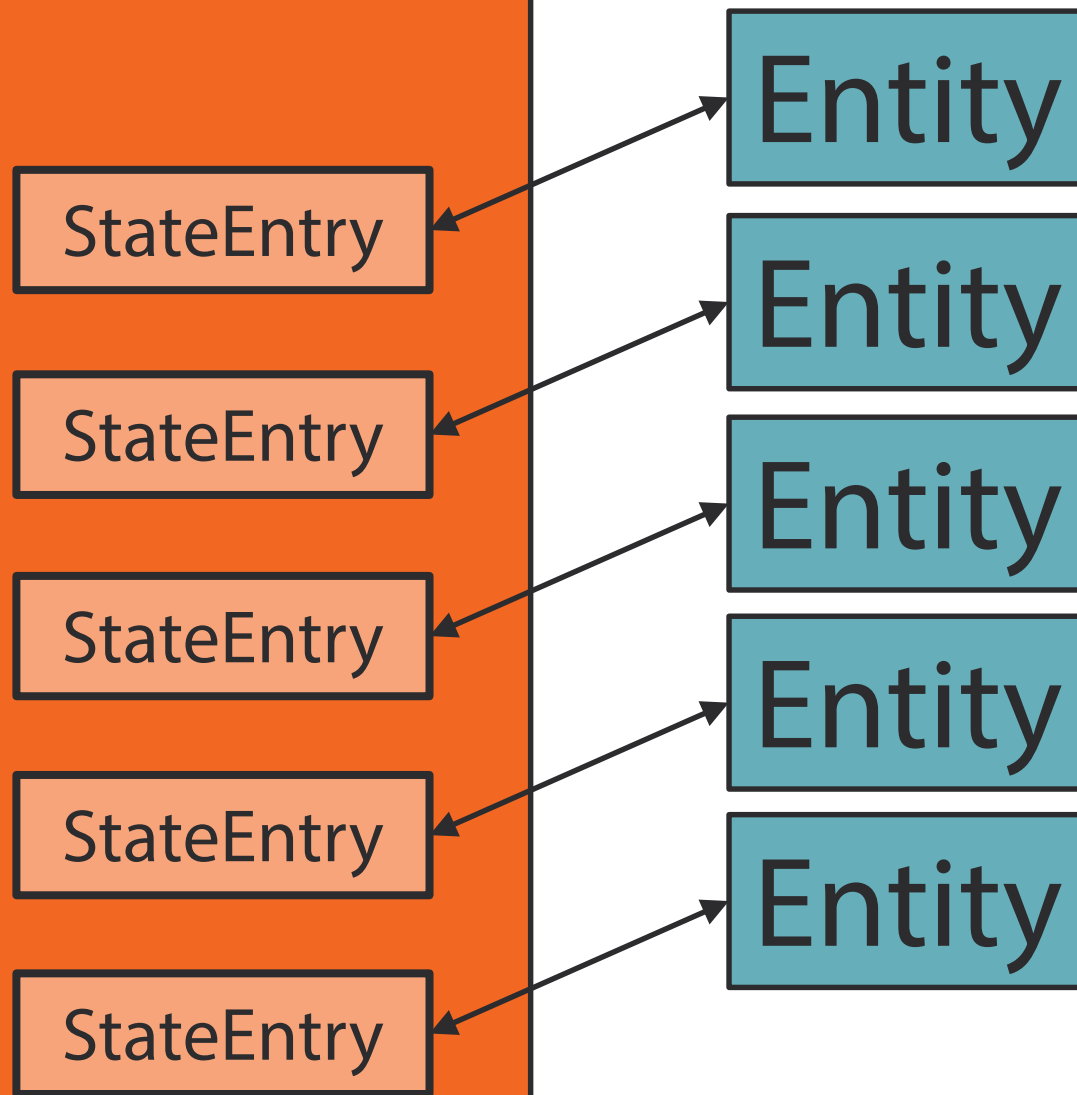
Controller

Repository

NinjaContext



# DbContext





# MVC Controllers and Views for Related Data

Foreign Key Properties  
Make Working in  
Disconnected Applications  
**MUCH EASIER**

# Using the Model

(via `DisconnectedRepository.cs`)

## in a

# Web API

# MVC

Data  
Model

Controller

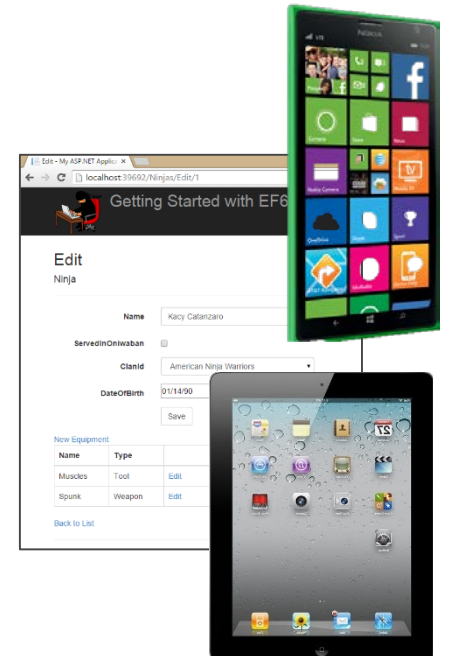
Name	Type
Muscles	Tool
Spunk	Weapon

# Web API

Data  
Model

Controller

JSON  
or  
XML  
or  
OData



# EF in aurelia !

## Consuming the Web API From a Website

# Bonus Clip

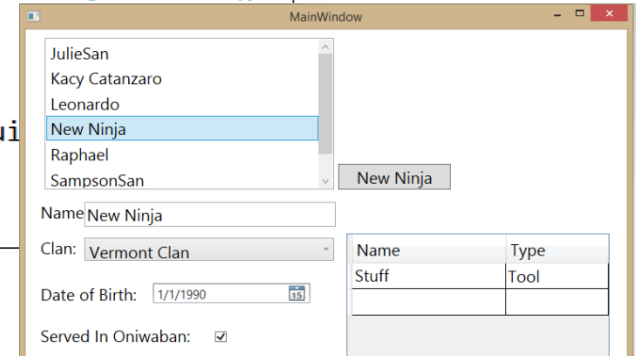
How the  aurelia Site  
Calls the Web API  
and Binds the Data

# Summary

```
public override int SaveChanges() {
    foreach (var history in this.ChangeTracker.Entries()
        .Where(e => e.Entity is IModificationHistory && (e.State == EntityState.Added ||
            e.State == EntityState.Modified)))
        .Select(e => e.Entity as IModificationHistory)
    ) {
        history.DateModified = DateTime.Now;
        if (history.DateCreated == DateTime.MinValue) {
            history.DateCreated = DateTime.Now;
        }
    }
    int result = base.SaveChanges();
    foreach (var history in this.ChangeTracker.Entries()
        .Where(e => e.Entity is IModificationHistory)
        .Select(e => e.Entity as IModificationHistory)
    ) {
        history.IsDirty = false;
    }
    return result;
}
```

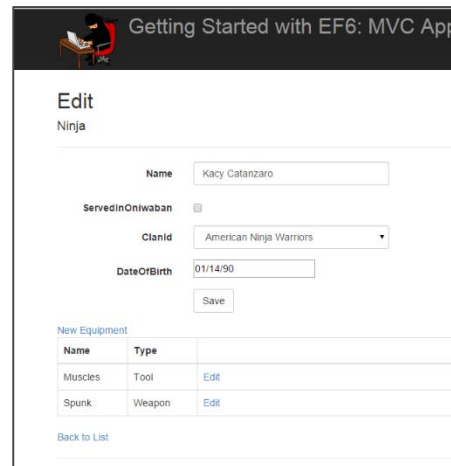
```
public class ConnectedRepository
{
    private readonly NinjaContext _context = new NinjaContext();

    public Ninja GetNinjaWithEquipment(int id)
    {
        return _context.Ninjas.Include(n => n.Equipment)
            .FirstOrDefault(n => n.Id == id);
    }
}
```

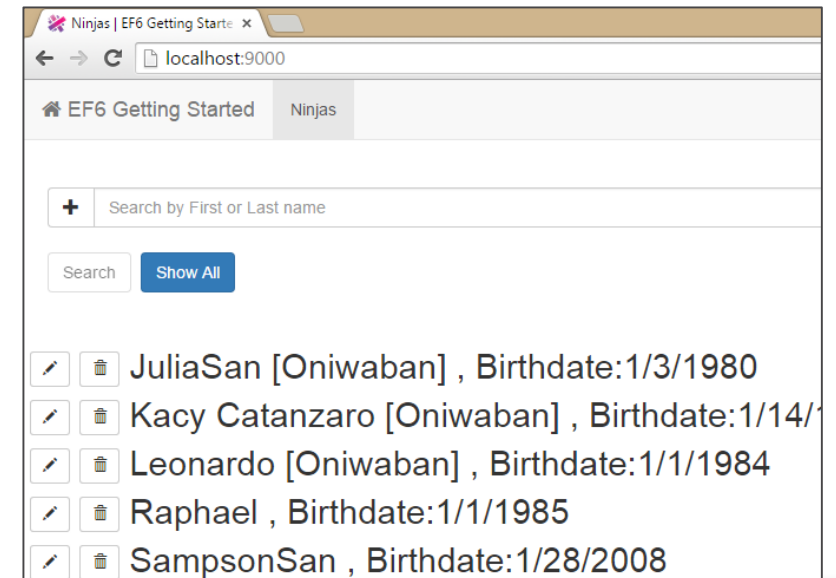


```
public class DisconnectedRepository
{
    public List<Ninja> GetQueryableNinjasWithClan(string query, int clanId)
    {
        return context.Ninjas.Include(n => n.Clan).ToList();
    }

    public List<Ninja> GetNinjasWithClan()
    {
        using (var context = new NinjaContext())
        {
            //return context.Ninjas.Include(n => n.Clan).ToList();
            return context.Ninjas.AsNoTracking().Include(n => n.Clan).ToList();
        }
    }
}
```



Foreign Key Properties  
Make Working in  
Disconnected Applications  
**MUCH EASIER**  
**MUCH EASIER**



# Resources

- EF6 Development Site: [entityframework.codeplex.com](http://entityframework.codeplex.com)
- EF6 Ninja Edition: What's New in EF6 (Pluralsight): [bit.ly/PS-EF6](http://bit.ly/PS-EF6)
- My Blog: [thedatafarm.com/blog](http://thedatafarm.com/blog)
- EF Team Blog: [blogs.msdn.com/adonet](http://blogs.msdn.com/adonet)
- [Aurelia.io](http://Aurelia.io)
- Data Binding with Aurelia: Data Points Column, MSDN Magazine Sept 2015  
[msdn.com/magazine](http://msdn.com/magazine)
- [Pluralsight.com](http://Pluralsight.com) (Courses on WPF, MVC, Web API and Aurelia)





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