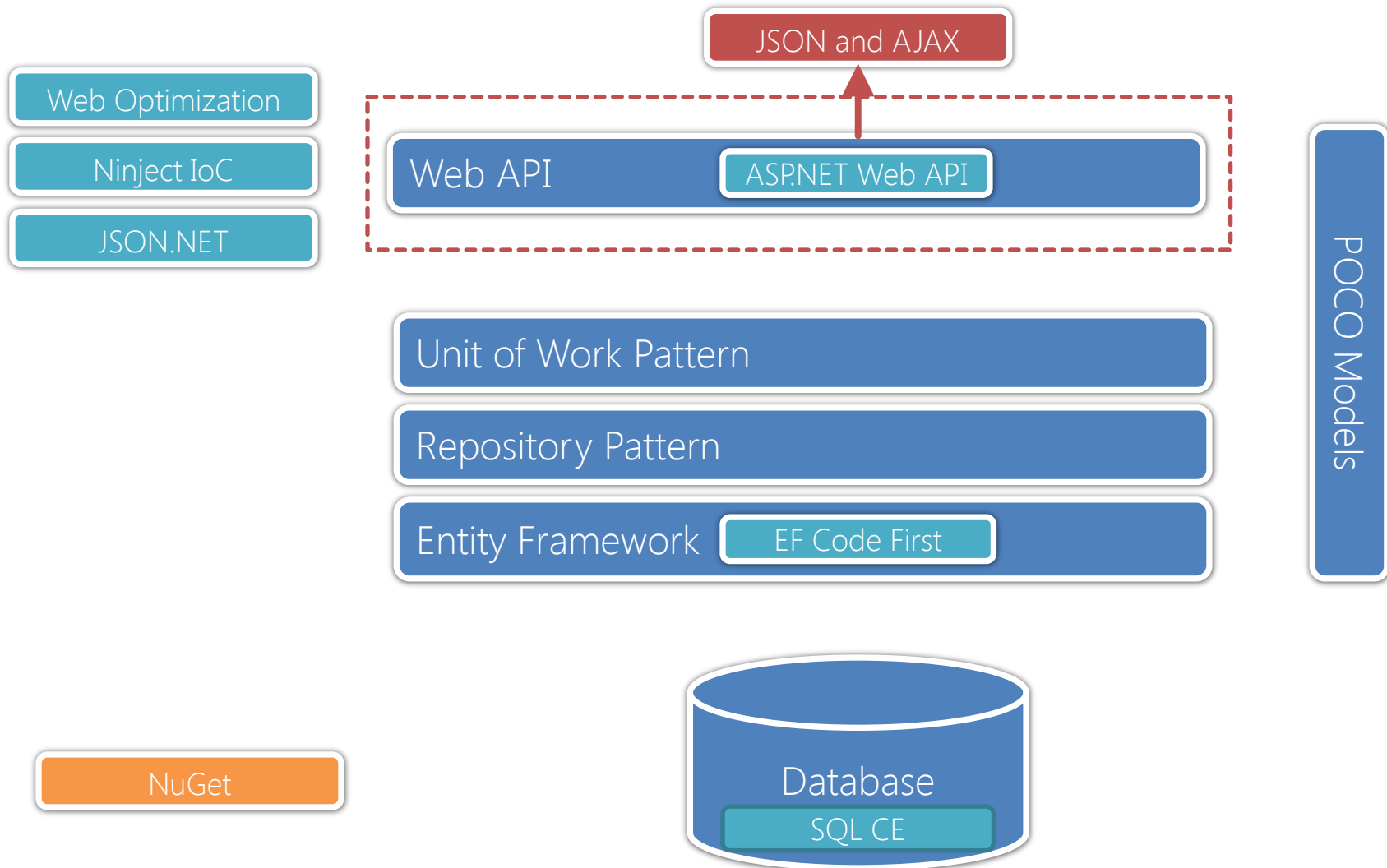


# Surfacing JSON Data with the ASP.NET Web API

John Papa



# Serving Data



# Agenda

- Why use ASP.NET Web API?
- Routes
- API Controllers
- Customizations
- Testing

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# What Problem Are We Solving?

- Transport data between server and a variety of devices via HTTP
- Use existing UoW and Repositories for data access
- Convert models to JSON ... and back



# **Why Use the ASP.NET Web API ?**

- **Simplifies web services**
- **Ideal for serving JSON**
- **Works with ASP.NET MVC and ASP.NET Web Forms**

# Serving JSON Over HTTP



Data Layer

ASP.NET Web API



HTTP GET

HTTP PUT,  
POST,  
DELETE

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# Requesting Data from Web API

**Step 1**

*Web Request*

**Step 2**

*Match to a Route*

**Step 3**

*Api Controller  
Responds*

# Web API Default Conventions

`http://johnpapa.net/api/widgets`

HTTP GET  
request

Controller Name

```
public class WidgetsController : ApiController
{
    public string Get()
    {
        return "Hello World";
    }
}
```

# Controllers and Routes

Default Route

```
routes.MapHttpRoute(name: "DefaultApi",  
    routeTemplate: "api/{controller}/{id}",  
    defaults: new { id = RouteParameter.Optional });
```

<http://johnpapa.net/api/widgets>

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# Testing Web API Requests

- Do the endpoints respond with success?
- Do the GET requests return the expected data?
- Do the POST, PUT, DELETE requests work?
- Qunit
  - Easily create tests for JavaScript code
  - <http://qunitjs.com/>

# Summary

## ■ Web API

- Convention over Configuration
- Works great with JSON and HTML/JavaScript clients

## ■ Define Your

- Routes
- API Controllers

## ■ Testing

- Browser
- Fiddler
- Qunit

## ■ Customizations

- Camel case
- JSON formatter
- Validator

## ■ Other Courses

- MVC 4 Fundamentals
  - By Scott Allen
  - Module 4 on the Web API
- Inversion of Control
  - By John Somnez