

Building a Consistent RESTful API with OData V4 in ASP.NET Core

Positioning OData and REST



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Coming Up



Course prerequisites and tooling

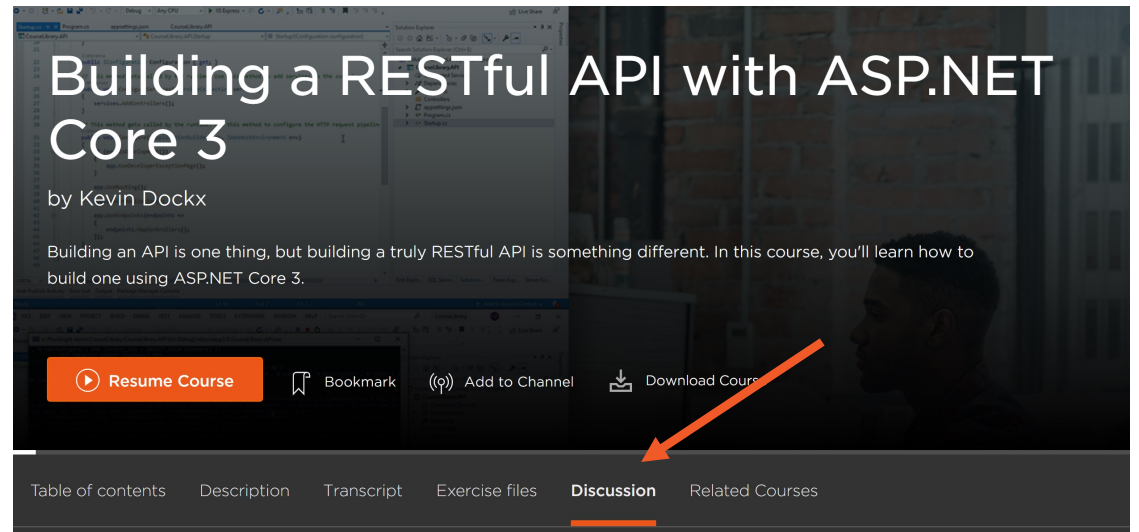
Positioning OData and REST

Inspecting the demo application

– Sending our first requests

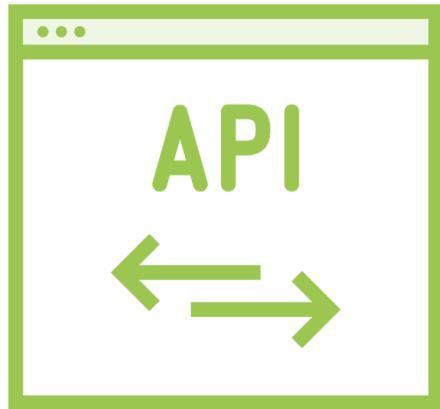
**Discussion tab on the
course page**

Twitter: @KevinDockx



(course shown is one of my other courses, not this one)

Course Prerequisites



**Some knowledge of
building APIs with
ASP.NET Core and C#**



**Some knowledge of
using Entity
Framework Core**



**Some notions of what
REST is**

Frameworks and Tooling



**Visual Studio 2019
v16.8 or better**

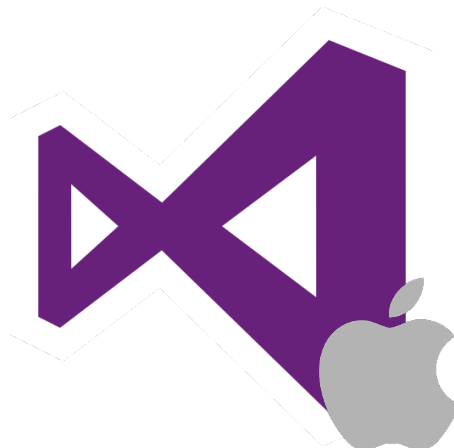


.NET 5

Frameworks and Tooling



Visual Studio 2019
v16.8 or better



Visual Studio for Mac

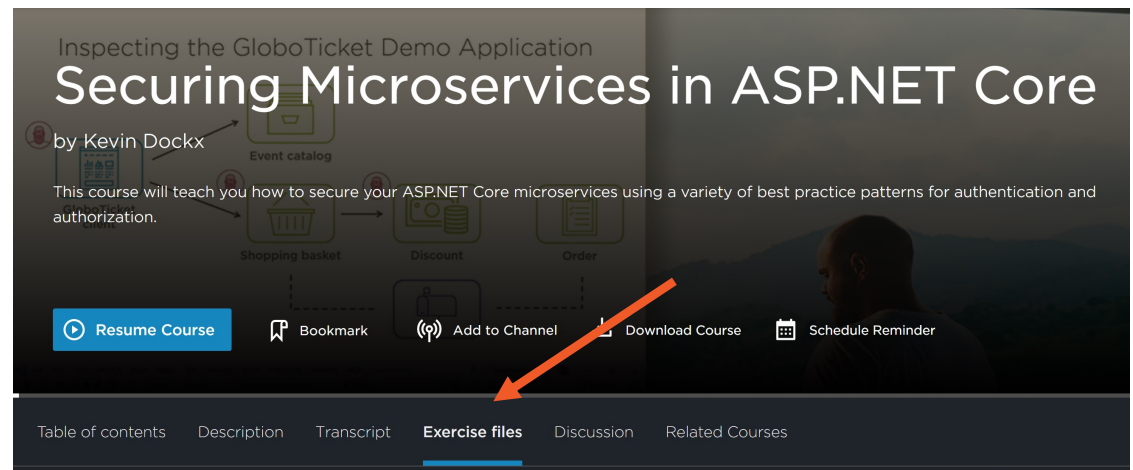


JetBrains Rider



Visual Studio Code

**Exercise files tab on the
course page**

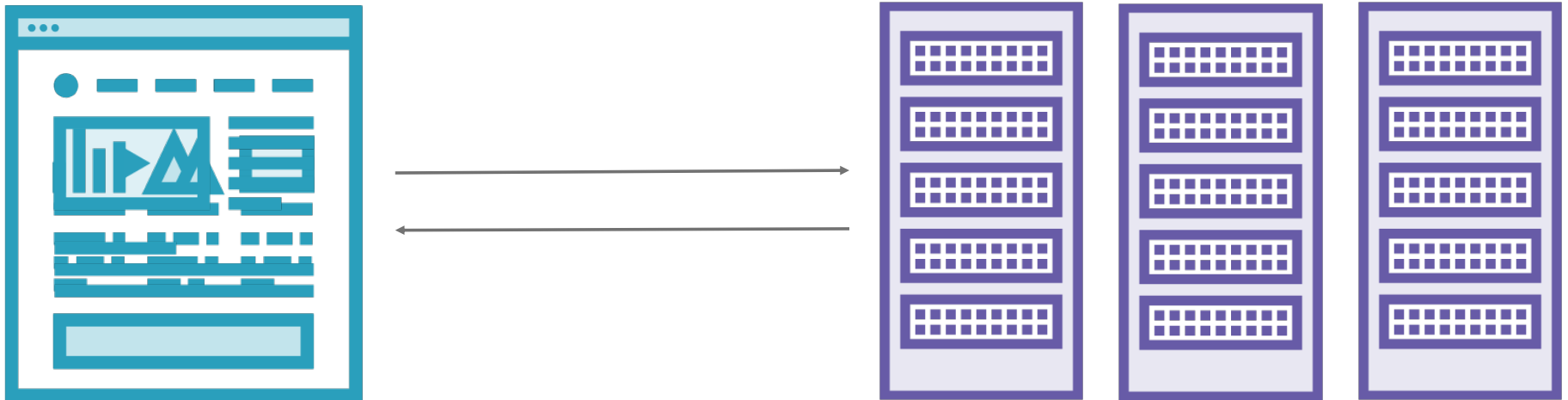


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REST is an architectural style for designing networked applications, intended to evoke an image of how a well-designed web application behaves

Roy Fielding

Representational State Transfer



A Few Words on REST

REST is an architectural style

- **Bound by a set of constraints**

REST is not a standard

- **Common design decisions are often reinvented**

“OData – The Best Way To REST”

The OData people

OData (Open Data Protocol)

An open protocol to allow the creation and consumption of queryable and interoperable RESTful APIs in a simple and standard way

Introducing OData



OASIS approved industry standard

https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=odata



Consistency, standardization



Solves common design issues (naming resources, querying data, ...)



Uniform way to describe data and data model

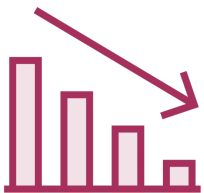


Machine-readable metadata enables automating interaction, generating client proxies, ...

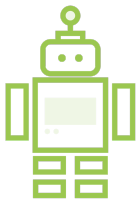
Interaction Between OData Services



No more need to reinvent the wheel



Lower learning curve



Automation becomes a real possibility

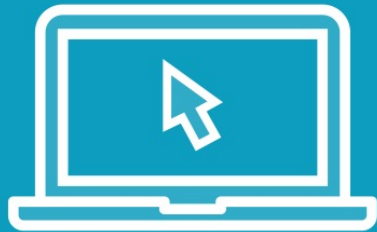
We're not just building services. We're implementing a standard.

Introducing the Demo Application

Getting acquainted with AirVinyl and OData requests

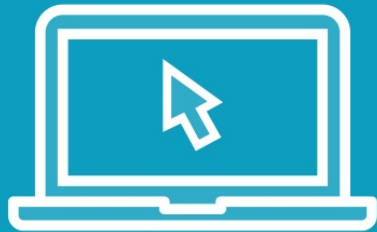
- Introducing AirVinyl
- Calling OData services with Postman
- Inspecting an OData URI

Demo



Importing a Postman collection

Demo



**Getting acquainted with AirVinyl and
OData requests**

Summary



REST – not just a bunch of HTTP services

OData: the Open Data Protocol

- **Best practices for building and consuming RESTful APIs**
- **Consistency & standardization**
- **Machine-readable metadata**

Summary



OData URI

- **Service root**
- **Resource path**
- **Query options (optional)**