Creating and Consuming an OData V4 Service

KEVIN DOCKX
ARCHITECT

@KevinDockx https://www.kevindockx.com

Coming Up

Entity Data Model and Conceptual Model

Selecting entities, entity sets and properties

Routing

Manipulating entities

Working with relations and navigation properties

Entity Data Model and Conceptual Model

Entity Data Model (EDM)

- Abstract data model
- Describes data exposed by an OData service
- Stored form of data is irrelevant

Entity Data Model and Conceptual Model

Conceptual Model

- Representation as entities and relationships
- OData-CSDL implements concepts of EDM

A Few Important Definitions

Entity

instance of Entity Type

Entity Type

named structured type with key

Complex Type

named structured type without key

Type Definition

named primitive type

Navigation Property

relationship from one entity to another

Entity Set

named collection of entities

Demo

Defining an Entity Data Model

- Add a new project for our OData services
- Add packages
- Define the EDM
- Inspect the service document and metadata document

Demo

Selecting an EntitySet

- Create an ODataController
- Create an action to return an entity set

Routing

Matches request uri to controller action

Routing templates in routing table

- MapODataServiceRoute

Routing

HTTP Method	URI	Action name	Sample URI	Sample action

Demo

Working with Attribute-based Routing

- [ODataRoute]

Demo

Controlling the Amount of Control Information

- Amount of metadata in response

Demo

Selecting an Individual Entity

- GET root/EntitySet(entityKey)

Demo

Selecting Properties and Raw Property Values

- GET root/EntitySet(entityKey)/PropertyName
- GET root/EntitySet(entityKey)/PropertyName/$value

Demo

Creating an Entity

- POST root/EntitySet

Demo

Updating an Entity

- PUT: only for full updates
- PUT root/EntitySet(entityKey)

Demo

Partially Updating an Entity

- PATCH: preferred way of updating
- PATCH root/EntitySet(entityKey)

Demo

Deleting an Entity

- DELETE root/EntitySet(entityKey)

Demo

Working with Relations and Navigation Properties

- Manipulation through association links

Summary

Entity Data Model and Conceptual Model

GET, POST, PUT/PATCH, DELETE

We’re implementing a standard

Routing

Relationships