

OData Platform, Tools, and Resources

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Outline

- OData support across platforms
- WCF Data Services vs Web API OData
- WCF Data Services
- OData tools and libraries

OData Server Platforms

- **WCF Data Services**
 - Initial OData Microsoft platform
- **Node.js, PHP, Java**
- **SQL Server Reporting Services**
- **SharePoint**
- **Windows Azure Table Storage**
- **Windows Azure Data Marketplace**
 - aka Microsoft "Dallas"
- **IBM WebSphere / DB2 / Informix**
- **ASP.NET Web API**

WCF Data Services vs Web API OData

■ WCF Data Services

- No WCF knowledge needed
- Is the most complete implementation of the latest OData specification from Microsoft
- Great for exposing whole data stores with little intervening logic
 - Interceptor coding patterns slightly awkward
- Complicated to use with non-LINQ provider data
- Not very extensible

■ ASP.NET Web API OData

- New addition to Web API stack
- Does not support all OData operations yet
 - Will catch up with frequent / short release cycle of Web API through NuGet
- Gives you more control over underlying data sources, model definition, and routing conventions
- Easier programming model for intervening business logic
- Can support multiple models per site, mix non-ODaata with OData services
- Very extensible

WCF Data Services Fundamentals

■ Server side

- Define DataService<T>
 - T is an Entity Framework model (DB or Code First)
- Expose data collections based on the model
- Set access permissions at a model level
- Define query and update interceptor methods for intervening logic

■ Data Services Client

- Generates client side proxy from OData metadata
- Available for .NET, Silverlight, Windows Phone, and Windows Store apps
- Proxy is a client side data repository
 - Exposes DataServiceCollections for OData service collections
 - Converts LINQ expression trees into OData query syntax URLs
 - Caches changes to entities, batch submits
 - Async queries and updates for all platforms
 - Sync queries and updates only for .NET framework clients

OData Consumption Tools

- **Fiddler**
 - General purpose HTTP tracing and debugging tool
- **OData Explorer**
 - Simple Silverlight query builder for OData sources
- **LINQPad**
 - Supports OData services
- **Excel**
 - Consumes OData services directly
- **Reporting tools**
 - SQL Reporting Services, Telerik, ComponentOne, etc.

OData Client Libraries

- **.NET / Silverlight / Windows Phone / WinRT**
 - WCF Data Services Client
- **JavaScript**
 - DataJS / JayData
- **iOS**
 - OData4ObjC
- **Android**
 - OData4j

Summary

- Many server platforms support exposing OData data services
- WCF Data Services has more advanced features of OData implemented
- Web API is a simple and flexible way for .NET developers to expose OData services that support the most important features of OData
- WCF Data Services client library still relevant for Web API developers
- Many consumption and debugging tools available for OData services
- Every relevant client platform has OData library support