Entity Framework 5.0: What's New

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Meet the expert: Don Kiely is a featured instructor on many of our SQL Server and Visual Studio courses. He is a nationally recognized author, instructor, and consultant specializing in Microsoft technologies. Don has many years of teaching experience, is the author or co-author of several programming books, and has spoken at many industry conferences and user groups. In addition, Don is a consultant for a variety of companies that develop distributed applications for public and private organizations.

Prerequisites: This course assumes that you are experienced with relational database design and programming concepts, and have experience with version 4.x of Entity Framework. Entity Framework is all about data access, and the course doesn't spend any time on data fundamentals. You'll also need a good understanding of object-oriented programming in C#, so that you know how to use the entity data objects that Entity Framework generates from your data model. You'll also need to have a working knowledge of Language INtegrated Queries (LINQ) in C#. The course uses Entity Framework with various SQL Server databases, so you should know enough about SQL Server to know how to perform various tasks and be able to connect to a database. But you don't need deep knowledge of SQL Server to use Entity Framework productively.

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Course description: In this course we'll start out by taking a look at the high-level view of this release, looking at what versions of .NET and Visual Studio it supports, and migrating Entity Framework 4 applications. There's a bit of a trick to doing a migration, but once you know it the process is pretty easy. Then you'll learn about the most highly-anticipated feature in this release, its support for ENUMS. Next I'll look at the new support for SQL Server's spatial data types, as well as support for table-valued functions. The model designer has gotten a lot of love from Microsoft in this release, with the ability to use custom colors for entities and, my favorite, creating multiple diagrams for a single model. We'll wrap up the course with a look at the performance enhancements provided by Entity Framework 5.

Course outline:

Entity Framework
- Introduction
- Entity Framework 5
- Migrating from Version 4.x
- Demo: Migrating Forward
- Demo: Target Framework
- Demo: Install EF5
- HierarchyID Support
- Demo: Entity Framework
- Demo: New Model
- Code First Enhancements
- Summary

Enum Support
- Introduction
- Enum Support
- Demo: Enums
- Demo: Enum Types
- Summary

Spatial Data
- Introduction
- Introduction to Spatial Data
- Spatial Data Types
- Spatial Data in Entity Framework
- Demo: Spatial Data
- Demo: Spatial Data Code
- Summary

Table Valued Functions
- Introduction
- Table-Valued Functions
- Demo: Table-Valued Functions
- Demo: Entities and Functions
- Summary

Entity Framework Designer
- Introduction
- Entity Framework Designer
- Demo: DB Context Support
- Demo: Multiple Diagrams
- Demo: Diagram Details
- Demo: Diagram Properties
- Demo: Stored Procedures
- Summary

Performance Enhancements
- Introduction
- Performance Enhancements
- Automatic Query Compilation
- Summary