SSRS 2014, Part 08 of 10: Web Service Programming

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 have a basic familiarity with the concept of relational databases and a basic understanding of what SQL Server is and the high-level tools in it, as well as how to create and manage objects using Management Studio. You should also have a basic understanding of how SQL Server implements security, including its authentication and authorization schemes, and how to assign permissions on securable objects to principals. You should know the fundamentals of Transact-SQL to write queries to retrieve data and join data from multiple tables, and how to execute scripts using the query editor in Management Studio.
It will be very helpful, but not absolutely necessary, to have experience with .NET development using Visual Studio 2012 or 2013 for the portions of the course that deal with SQL Server Data Tools. At the very least, we'll assume that you are well familiar with the Visual Studio user interface.

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Course description: In this course you'll learn how to use the Report Server Web Service, and see some examples of how useful it is. You'll learn about the two endpoints that Reporting Services exposes, the management and execution endpoints, and the differences between them. You'll also see how to build an application using the Web services to display a list of reports and render format options, both retrieved dynamically from the report server, as well as how to execute the selected report using both a custom URL and the execution Web service. As a bonus, you'll learn how to dynamically determine whether the selected report has required parameters and one way to supply parameters to the report.

Course outline:

Accessing RS Programmatically
- Introduction
- Report Server Web Services
- Demo: Web Services
- Summary

Building an App Using API
- Introduction
- Create Project & Add Web Refs
- Demo: Create Project
- Demo: Add Reference
- Demo: Add Reference Cont
- Demo: Web Reference
- Demo: Object Browser
- Demo: Data Source
- Demo: Add Ref to
- Summary

Management Classes and Methods
- Introduction
- Demo: Classes and Methods
- Demo: ReportingService2010
- Demo: ReportingService - more
- Summary

Create Infrastructure
- Introduction
- Demo: Edit Web.config
- Demo: Add Models
- Demo: Add Controller/View
- Demo: Create the View
- Summary

Programming the Web Service
- Introduction
- Demo: App Settings/Connection
- Demo: Set Credentials/Get List
- Demo: RenderFormat List
- Demo: List - Further Filters
- Demo: Return & Dropdowns
- Demo: Add Buttons & Execute
- Summary

Execution Web Service
- Introduction
- Demo: HTTP POST Form
- Demo: Report Setup
- Demo: Call by Render method
- Demo: Response Object
- Demo: Run App
- Demo: Drill Into
- Summary

Handle Required Parameters
- Introduction
- Demo: Report Parameters
- Demo: Set Values
- Demo: Run App Values
- Summary

Using a Custom URL
- Introduction
- Demo: Custom URL
- Demo: Index Action
- Demo: Run App
- Summary