

Next Generation Web Applications: Patterns, Practices and Technologies to Build Richer Web Solutions on the Microsoft Platform

Duration

5 days

In 2005, AJAX was introduced as “the next big thing” for developers and architects of Web solutions. AJAX initially meant just a particular ability of Web pages to refresh their content partially without a full reload; more recently, however, there has been a natural selection of frameworks and tools.

Instructor

Dino Esposito

AJAX applications are highly interactive, responsive and easy to use. They are also quite efficient from a network perspective. The real problem, however, is the difficulty most professionals encounter when architecting and implementing these applications.

Class Limit

30 students

In five days of intense training, seminar participants will explore in detail the challenge of AJAX architectures and the Web, and identify an *easy* and a *not-so-easy* way to AJAX with their positives and negatives, features and drawbacks. They will also devise an AJAX presentation layer as a two-tier model with a JavaScript-powered front-end and a multi-layer service-based back-end communicating over HTTP and using JSON feeds.

Price

On-site

Please contact SPC
for pricing (contact
information on page 2)

Public Training

\$3,250 (5 days)

*Discount available for
early registration

Additional discussion topics include:

- Which services should be used? REST, WS-*, WCF, or just a remote API?
- Should the user interface be created programmatically in JavaScript or have it generated as markup on the server?
- Is it worth considering client technologies more powerful than JavaScript? And a delivery format for the application that is more descriptive than HTML?

Materials Provided

- Student manual containing the course slides
- Student handouts with class exercises

Intended Audience & Prerequisites

The workshop is ideal for developers and architects of Web solutions. Familiarity with ASP.NET programming is required, as well as a strong knowledge of the ASP.NET internal architecture. Experience with dynamic HTML, JavaScript, NET 3.x, WPF and WCF is highly beneficial.

Instructor

Dino Esposito is one of the world’s authorities on web technology and software architecture. His extensive hands-on experience includes architecting and building distributed systems for leading banking and insurance companies.

A popular author, Dino’s articles are published monthly on at least five different magazines and Web sites. His most recent books include *Programming ASP.NET 3.5—Core Reference* (Microsoft Press, 2008), *Introducing Microsoft ASP.NET AJAX* (Microsoft Press, 2007), and *Programming Microsoft ASP.NET 2.0 Applications — Advanced Topics* (Microsoft Press, 2005).

TRAINING

Next Generation Web Applications - Outline

ASP.NET AJAX—The Easy Way

- AJAX: Facts and the Classic Web Architecture
 - *AJAX to revitalize the Web*
 - *AJAX and smart-client solutions*
 - *Scenarios and products*
- Orchestrating AJAX in ASP.NET
 - *The Script Manager*
 - *Managing script files and auxiliary resources*
- Adding AJAX Capabilities to ASP.NET
 - *Partial Rendering*
 - *Practical rules for a partial rendering that rocks*
 - *Functionality and additional components*
- Real-world Partial Rendering
 - *Optimization and rationalization*
 - *The Single-Page Interface Model*
 - *Structural limitations (simultaneous calls, polling)*
 - *Considerations on viewstate, partial viewstate, and application models*

ASP.NET AJAX—The Not-So-Easy Way

- Power to the Client
 - *The Microsoft AJAX library for JavaScript*
 - *Managing script files and auxiliary resources*
- Aspect-oriented AJAX
 - *Extenders: AJAX Control Toolkit & other products*
 - *Rethinking input forms*
 - *Adding modality to AJAX pages*
- Common Problems and AJAX Patterns
 - *Browser-side Templating & Timeout*
 - *Predictive Fetch & On-demand JavaScript*
 - *Progress Refresh & Unique URLs*
- The Service Layer
 - *Script services*
 - *WCF services*
- WCF services within the ASP.NET runtime
 - *Security and performance considerations*

ASP.NET State-Of-The-Art

- LINQ at a Glance
 - *Integrated Query Language on query-able types*
 - *Focus on LINQ-to-SQL*
 - *Data source models in .NET & Visual Studio*
- LINQ for (ASP.NET) Architects
 - *Data source patterns*
 - *Middle-tier vs. Data-tier*
 - *LINQ-to-Entities*
- ASP.NET 3.5—What's New
 - *List View control & trends in Web controls*
 - *New approach to paging & page-able controls*
 - *Building hierarchical views*
- ASP.NET 3.5 Service Pack 1
 - *The ASP.NET MVC Framework*
 - *MVC vs Web Forms*
 - *Scaffolding data with dynamic data controls*

The (Deep) Impact of Silverlight

- Silverlight and AJAX
 - *Silverlight is ActiveX done properly*
 - *Hosting Silverlight in Web pages*
- Essential WPF
 - *Graphics, Data Binding, Layout*
 - *Input, Styling & Skinning*
- Scripting the Silverlight Engine
 - *JavaScript as glue for XAML elements*
 - *Using JavaScript to expose XAML content to the HTML page*
 - *Exploring media capabilities*
 - *Silverlight w/o AJAX*
- Silverlight 2.0
 - *From script-behind to code-behind*
 - *Silverlight as a standalone development platform for RIA*

Building RIA with Silverlight

- Fundamentals of RIA with Silverlight
 - *Container elements & the WPF UI framework*
 - *Layout capabilities*
 - *Input and commands*
 - *Grid and other common controls*
 - *Rich and scrollable views*
- Networking and I/O
 - *Connecting to remote WCF services*
 - *Simple HTTP endpoints*
 - *File download and XML manipulation*
 - *Isolated storage*
- Architecture and Programming Model
 - *The embedded CLR and dynamic languages*
 - *Packaging and performance*
 - *Custom assemblies*
 - *The security model*
 - *Application code vs Platform code*
- One XAML Fits All
 - *Sharing XAML-based user interface*
 - *The need for GUI patterns in Silverlight*
 - *MVP vs M-V-VM*

For more information on this or other SPC Springboard courses, please visit www.spcspringboard.com or e-mail SPC at info@spc.ca

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