

Visual Studio 2005 Tips, Tricks, and Random Bits

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◆ Developer

- Programming Manager, Fred Hutchinson Cancer Research Center
- Focus: ASP.NET, ASP, VB, C#, SQL Server, ...
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- Microsoft MVP

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- Member INETA Speakers Bureau

◆ Author

- Author/co-author of a dozen books, including...
 - *ASP.NET for Developers*
 - *Access Cookbook, 2nd edition*
 - *Access 2002 Desktop/Enterprise Dev Handbook*

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Slides Download

- ◆ You can download them from:
 - www.deeptraining.com/litwin

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About this Talk

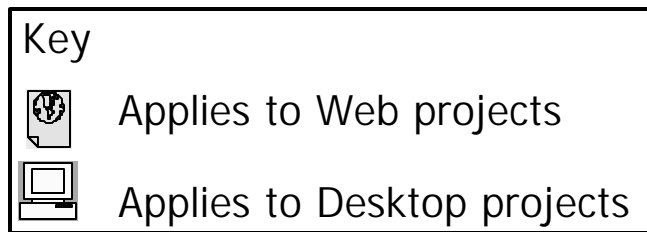
- * Not an introduction to Web development using Visual Studio 2005
- * Not a look at new features in VS 2005
- ☑ A look at stuff in Visual Studio 2005 that either
 - ☑ I found cool enough to mention
 - ☑ Or that I thought was worthy of an explanation

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My Bias for this Talk (and LIG)

- ◆ ASP.NET Development
- ◆ However, many of the tips & tricks apply to both Desktop and Web development



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Agenda

- ◆ Source Code Tracking
- ◆ File Tricks
- ◆ Converting VS 2003 Web Sites
- ◆ Compilation and Deployment
- ◆ Export/Import Settings
- ◆ AutoRecover
- ◆ What Happened to Grid Layout?
- ◆ Encrypting Web.config sections
- ◆ Finding References
- ◆ Code Definition Window
- ◆ Templates
- ◆ Snippets
- ◆ Refactoring
- ◆ Visualizers
- ◆ Sproc Debugging
- ◆ Auto-generating Sitemaps
- ◆ Provisioning Application Database for Web site

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Source Change Tracking



- ◆ Source changes tracked in margin
 - Uncompiled/saved changes in yellow
 - Recently compiled/saved changes in green

File Tricks (1 of 2)



- ◆ Close all open files
 - Select Window|Close All Documents
- ◆ Close all files but one
 - Right-click on the tab of the file you wish to remain open and select Close All But This

File Tricks (2 of 2)



- ◆ Open a Windows Explorer window to the location of an open file
 - Right-click on the tab of the file you wish to remain open and select Open Containing Folder
- ◆ Copy a file's path to the clipboard
 - Right-click on the tab of the file you wish to remain open and select Copy Full Path

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Converting VS 2003 Web Sites The Issues



- ◆ Web projects are different in VS 2005
 - Project and solution files are deemphasized
 - Web sites are now defined simply by the files in the Web site folders
- ◆ Web pages are also different
 - Codebehind replaced with codefile attribute
 - Partial classes (not inheritance) is used to link ASPX and codefile
 - No more hidden regions in the code

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Converting VS 2003 Web Sites How it Works



- ◆ Open one of the following in VS 2005
 - Solution file
 - Project file
 - Web site folder
- ◆ VS 2005 starts the conversion wizard and attempts to convert your site
 - Chance to backup site
 - Produces report and log when done with conversion
- ◆ Project will no longer be under source control

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Converting VS 2003 Web Sites



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Converting VS 2003 Web Sites



Conversion Report - CustSys2

Time of Conversion: Sunday, December 04, 2005 15:27 PM

Solution: CustSys2

| Filename | Status | Errors | Warnings |
|----------------|---------------------------------|--------|----------|
| ⊕ CustSys2.sln | Converted | 0 | 0 |
| ⊕ CustSys2.suo | | 0 | 0 |
| 2 files | Converted: 1 Not converted 1 | 0 | 0 |

Project: CustSys2

| Filename | Status | Errors | Warnings |
|---|---------------------------------|--------|----------|
| ⊕ http://localhost/CustSys2/CustSys2.csproj | | 0 | 1 |
| 1 file | Converted: 0 Not converted 1 | 0 | 1 |

Project: CustSys2.csproj

| Filename | Status | Errors | Warnings |
|-------------------|---------------------------------|--------|----------|
| ⊕ CustSys2.csproj | Converted | 0 | 0 |
| 1 file | Converted: 1 Not converted 0 | 0 | 0 |

Project: NWindBizTier

| Filename | Status | Errors | Warnings |
|---|---------------------------------|--------|----------|
| ⊕ NWindBizTier\NWindBizTier.cs | | 0 | 0 |
| ⊕ NWindBizTier\NWindBizTier.csproj | Converted | 0 | 0 |
| ⊕ NWindBizTier\NWindBizTier.csproj.user | | 0 | 0 |
| 3 files | Converted: 1 Not converted 2 | 0 | 0 |

Conversion Settings

Solution File: D:\Documents and Settings\Paul\My Documents\Visual Studio Projects\CustSys2\CustSys2.sln

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Where's Release Configuration?



- ◆ For Web sites, there's only Debug configuration
- ◆ Don't worry; this doesn't matter anymore
- ◆ Unlike v1, version 2.0 now uses compilation section of web.config to determine whether to compile using debug or release

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Deploying Web Sites So Many Choices



- ◆ Website|Copy Web Site
 - copies web site much like v 1.1
 - but now with FrontPage-like flexibility
- ◆ Build|Publish Web Site
 - pre-compiles & strips source code from site and copies it to location
 - uses aspnet_compiler command-line util
- ◆ Web Deployment Projects
 - more sophisticated control over deployment
 - Free add-in to VS 2005
 - see later slide...

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Copy Web Site



Connections: ftp://ftp.wbz4.registeredsite.com/www (user1089310) Connect Disconnect

Source Web site: D:\Deep\www\new\Litwin

| Name | Status | Date Modified |
|--------------|-----------|---------------------|
| academ... | | |
| aspnrx_... | | |
| aspnrx_... | | |
| dallas05 | | |
| dbdesign | | |
| Advance... | Unchanged | 9/1/2004 3:13 PM |
| apr101... | Unchanged | 5/6/2003 8:44 AM |
| APR101... | New | 5/9/2003 9:10 AM |
| apr201... | Unchanged | 4/13/2004 1:35 PM |
| ARP202... | New | 10/19/2004 9:09 PM |
| ARP202... | New | 12/6/2004 10:32 AM |
| ASPJS_... | New | 10/3/2002 11:40 AM |
| AWF202... | New | 9/1/2004 3:24 PM |
| comdex... | Unchanged | 11/20/2003 11:05 AM |
| default.a... | Unchanged | 11/15/2005 8:17 PM |
| js.aspx | Unchanged | 10/3/2002 11:53 AM |
| Litwin_A... | New | 4/19/2004 3:23 PM |
| Litwin_A... | New | 8/18/2005 2:44 PM |

Last refresh: 11/30/2005 10:19 PM
 Show deleted files since the last copy operation

Remote Web site: ftp://ftp.wbz4.registeredsite.com/www/Litwin

| Name | Status | Date Modified |
|--------------|-----------|---------------------|
| academ... | | |
| apr251 | | |
| aspnrx_... | | |
| aspnrx_... | | |
| dallas05 | | |
| dbdesign | | |
| Advance... | Unchanged | 12/1/2005 1:17 AM |
| apr101... | Unchanged | 12/1/2005 1:19 AM |
| apr201... | Unchanged | 12/1/2005 1:19 AM |
| ARP202... | New | 12/28/2004 12:09 AM |
| ARP202... | New | 12/28/2004 12:10 AM |
| ASPJS_... | New | 12/28/2004 12:10 AM |
| AWF202... | New | 12/28/2004 12:10 AM |
| comdex... | Unchanged | 12/1/2005 1:19 AM |
| default.a... | Unchanged | 12/1/2005 1:19 AM |
| js.aspx | Unchanged | 12/1/2005 1:19 AM |
| Litwin_A... | New | 12/28/2004 12:11 AM |
| Litwin_A... | New | 8/18/2005 4:58 PM |

Last refresh: 11/30/2005 10:19 PM

Status:
 Copy from Source Web site to Remote Web site is finished. Completed at 11/30/2005 10:19:25 PM. View Log...

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Publish Web Site



Publish Web Site [?] [X]

Target Location: (ftp://..., http://... or drive:\path)
http://localhost/compiledweb ...

Allow this precompiled site to be updatable

Use fixed naming and single page assemblies

Enable strong naming on precompiled assemblies

Use a key file generated with the Strong Name tool

Key file location:
... ..

Delay signing

Use a key container

Key container:
.....

Mark assemblies with AllowPartiallyTrustedCallerAttribute (APTCA)

OK Cancel

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Web Deployment Projects



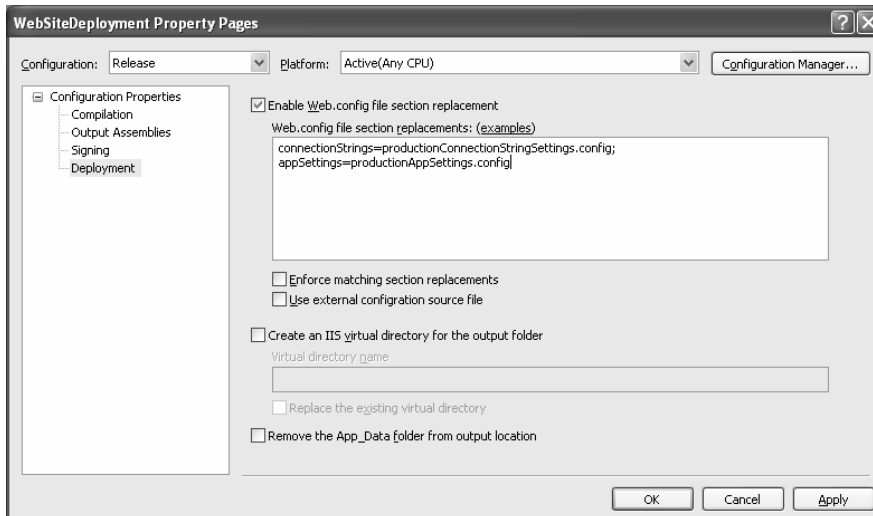
- ◆ Download from <http://msdn.microsoft.com/asp.net/reference/infrastucture/wdp/default.aspx>
- ◆ Why use?
 - More control over number of assemblies generated by a pre-compiled web project & their naming
 - use MSBuild to define pre and post build rules
 - customize and modify a web application's web.config file at deployment
 - More details at Scott Guthrie's blog post at <http://weblogs.asp.net/scottgu/archive/2005/11/06/429723.aspx>

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Web Deployment Projects

Customizing web.config at deployment



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Export/Import/Reset Settings



- ◆ Tools|Import and Export Settings...
 - Export selected environment settings
 - default export location is "My Documents\Visual Studio 2005\Settings"
 - Import selected environment settings
 - You have chance to backup first
 - Reset all settings
 - You have chance to backup first

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Export/Import/Reset Settings



- ◆ Using consistent auto-synchronized set of settings for a team
 - Tools|Options...
 - Under Environment|Import and Export Settings
 - Select "Use team settings file"
 - This settings file is automatically re-applied each time Visual Studio detects a newer version is available

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AutoRecover Settings



- ◆ Environment|AutoRecover
 - Automatically save & restore changes when Visual Studio tanks
 - Doesn't appear to be useable otherwise

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What Happened to Grid Layout?



- ◆ VS 2005 now supports CSS positioning on a per-control basis (default is off)
- ◆ Enabling CSS-P for a control
 - Place control on page
 - Select Layout|Position and Absolute or Relative
- ◆ Enabling CSS-P for page
 - Select Layout|Auto-position Options...
- ◆ Creating a Layer (<div> with CSS-P)
 - Select Layout|Insert Layer

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Encrypt Web.config Section



- ◆ Not directly supported by VS 2005
 - Use `aspnet_regiis`
- ◆ Basic syntax for IIS (VRoot) site
 - `aspnet_regiis -pe section -app app_name`
- ◆ Basic syntax for file-based site
 - `aspnet_regiis -pef section file-path`

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Encrypt Web.config Examples (1 of 3)

- ◆ Encrypting connectionStrings section of web.config for VRoot using default encryption provider (RSA):
 - `aspnet_regiis -pe "connectionStrings" -app "/DataControls"`
- ◆ Encrypting connectionStrings section of web.config for VRoot using DPAPI:
 - `aspnet_regiis -pe "connectionStrings" -app "/DataControls" -prov "DataProtectionConfigurationProvider"`

Encrypt Web.config Examples (2 of 3)

- ◆ Encrypting connectionStrings section of web.config for a non-VRoot Folder:
 - `aspnet_regiis -pef "connectionStrings" "D:\Documents and Settings\Paul\My Documents\Visual Studio 2005\WebSites\WebSite1"`

Encrypt Web.config Examples (3 of 3)

- ◆ Decrypting connectionStrings section of web.config for VRoot:
 - `aspnet_regiis -pd "connectionStrings" -app "/DataControls"`
- ◆ Decrypting connectionStrings section of web.config for a non-VRoot Folder:
 - `aspnet_regiis -pdf "connectionStrings" "D:\Documents and Settings\Paul\My Documents\Visual Studio 2005\WebSites\WebSite1"`

Find All References

- ◆ Right-click on object and select Find All References
 - VS displays the Find Symbol Results window with a list of all the references to the object

Code Definition Window



- ◆ Handy feature that displays the definition of a symbol in a read-only window that is automatically synched with the cursor
- ◆ *Not* supported in VB ☹

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Create Templates



- ◆ Select File|Export Template...
 - Project template
 - makes project into a project template (accessible from New Project dialog)
 - Item template
 - makes file into a item template (accessible from New Item dialog)

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Create Templates



Export Template Wizard

Choose Template Type

This wizard will allow you to export a project or project item from the current solution to a template which future projects can then be based upon.
Which type of template would you like to create?

Project template
A project template will allow a user to create a new project based on your exported project. A user will be able to utilize your template from the New Project dialog box for client projects and from the New Website dialog box for websites.

Item template
An item template will allow a user to add your item to one of their existing project. Your template will be available to the user from the Add New Item dialog box.

From which project would you like to create a template?
AcademicVegas2005_DataControls

What language category should this template appear under in the New Project dialog box?
Visual C#

< Previous Next > Finish Cancel

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Snippets



- ◆ Great way to add common code to apps
 - C#
 - basic C# constructs
 - supports Surround With
 - no reference support
 - VB
 - more extensive library of reusable code
 - no Surround With
 - supports Imports and references

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Snippets Using Them – All Languages



- ◆ All languages
 - Right-click in code (or press Ctrl+k, Ctrl+x) and select Insert Snippet...
 - C#, XML, and J# also let you select Surround With... (not VB ☹)

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Snippets Using Shortcuts in VB



- ◆ VB
 - Type snippet shortcut and press Tab
 - Or type first few characters of snippet, a ? and Tab
 - select from dropdown list using Tab, Enter, or click

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Snippets Using Shortcuts in C#



- ◆ C#
 - Type snippet shortcut and press Tab, Tab
 - Or type first few characters of snippet
 - select from dropdown list using Tab, Tab

Snippets Managing Snippets



- ◆ Snippets Manager
 - Tools|Code Snippets Manager
 - Determine snippet shortcuts
 - Determine filepath of particular snippet
 - Add, Remove, Import snippets

Snippets

Custom Example



```
<?xml version="1.0" encoding="utf-8" ?>
<CodeSnippets xmlns="http://schemas.microsoft.com/VisualStudio/2005/CodeSnippet">
  <CodeSnippet Format="1.0.0">
    <Header>
      <Title>ifnotpostback </Title>
      <Shortcut>ifpost</Shortcut>
      <Description>Code snippet for if (postback) statement</Description>
      <Author>Paul Litwin</Author>
      <SnippetTypes>
        <SnippetType>Expansion</SnippetType>
        <SnippetType>SurroundsWith</SnippetType>
      </SnippetTypes>
    </Header>
    <Snippet>
      <Code Language="csharp"><![CDATA[if (Page.IsPostBack)
{
    $selected$ $end$
}]]>
    </Code>
  </Snippet>
</CodeSnippet>
</CodeSnippets>
```

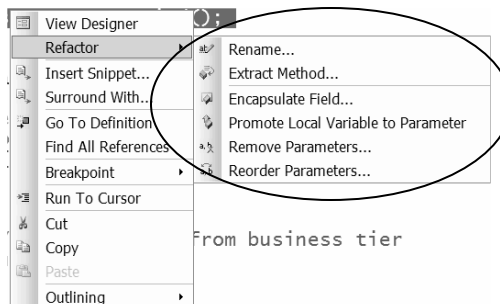
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Refactor



- ◆ Rework some chunk of code to make it better without changing its functionality
- ◆ Fixing it when it ain't broke!
- ◆ Out of the box, C# supports six refactorings
- ◆ VB supports none



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Refactoring in VB



- ◆ VB users can download a free add-in from Developer Express (the makers of CodeRush) that gives VB refactoring capabilities.
 - <http://www.devexpress.com/vbrefactor/>
 - also adds Surround With to VB snippets

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Debug Visualizers



- ◆ DataSet
 - supports DataSet
 - DataTable
 - DataView
- ◆ Text
 - supports normal, HTML, and XML
- ◆ You can even create your own visualizers

Table: Employees

| EmpId | LastNar | FirstNa | Title | TitleOfCru | BirthDate | HireDate | Address | City | Repr | Postal |
|-------|----------|---------|------------------|------------|-----------------|------------------|--------------------------|---------|------|----------|
| 1 | Davo... | Nancy | Sales Represe... | Ms. | 12/8/1948 12... | 5/1/1992 12:0... | 507 - 20th Ave. E. Cl... | Sea... | WA | 98122 |
| 2 | Fuller | Andr... | Vice Presiden... | Dr. | 2/19/1952 12... | 8/14/1992 12:... | 908 W. Capital Way | Tac... | WA | 98401 |
| 3 | Leve... | Janet | Sales Represe... | Ms. | 8/30/1963 12... | 4/1/1992 12:0... | 722 Moss Bay Blvd. | Kirk... | WA | 98033 |
| 4 | Pear... | Marq... | Sales Represe... | Mrs. | 9/19/1937 12... | 5/3/1993 12:0... | 4110 Old Redmond ... | Red... | WA | 98052 |
| 5 | Buch... | Steven | Sales Manager | Mr. | 3/4/1955 12:... | 10/17/1993 1... | 14 Garrett Hill | Lon... | | SW1 7... |
| 6 | Suyva... | Mich... | Sales Represe... | Mr. | 7/2/1963 12:... | 10/17/1993 1... | Coventry House □ □ □ | Lon... | | EC2 7... |
| 7 | King | Robert | Sales Represe... | Mr. | 5/29/1960 12... | 1/2/1994 12:0... | Edgemoor Hollow □ □ | Lon... | | RG1 1... |
| 8 | Calla... | Laura | Inside Sales ... | Ms. | 11/9/1958 12... | 3/9/1994 12:0... | 4726 - 11th Ave. N.E. | Sea... | WA | 98105 |
| 9 | Dods... | Anne | Sales Represe... | Ms. | 1/27/1966 12... | 11/15/1994 1... | 7 Houndstooth Rd. | Lon... | | WG2 7... |

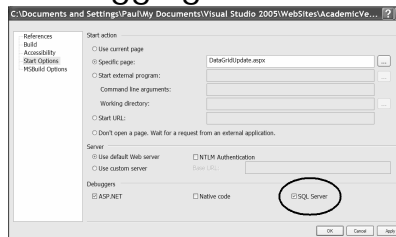
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Enabling Application to Stored Procedure Debugging (1 of 2)



1. Requires Visual Studio 2005 Pro/Team System
2. Right-click on application project and select Property Pages.
 - ◆ For Web projects, click on Start Options
 - ◆ For WinForm, click on Debug
3. Enable SQL Server debugging



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Enabling Application to Stored Procedure Debugging (2 of 2)



4. Set breakpoint in stored procedure
5. Run or step into code that executes stored procedure
6. This should cause stored procedure breakpoint to be hit

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Auto-generating Sitemaps



- ◆ Web.sitemap file is nice but wouldn't it be nice to be able to point VS at your site and say, "VS, create a sitemap for me!"
- ◆ Of course, Visual Studio doesn't support this but Scott Allen created a VS macro to do this
 - Download from <http://odetocode.com/Blogs/scott/archive/2005/11/29/2537.aspx>
 - If you're not familiar with VS macros, read the comments to the post

Provisioning Application Database and Un-Hardwiring SQLExpress (1 of 3)



- ◆ Visual Studio 2005 is setup so that SQLExpress is the application database (membership, role, & personalization providers)
- ◆ This is hard-wired in machine.config
- ◆ You need to perform a few extra steps to use non-express version of SQL Server for the app db in your project

Provisioning Application Database and Un-Hardwiring SQLExpress (2 of 3)



1. Run aspnet_regsql command-line tool to start ASP.NET SQL Server Setup Wizard
 - a) On 2nd page, select Configure SQL Server for Application Services
 - b) On the next page, specify your database server name and <default> for database
(only need to do step #1 once per SQL Server)
2. From Visual Studio, add a new web.config file to the site (if it's not already there)

Provisioning Application Database and Un-Hardwiring SQLExpress (3 of 3)



3. Replace the empty <connectionStrings/> element with:

```
<connectionStrings>  
  <remove name="LocalSqlServer"/>  
  <add name="LocalSqlServer"  
    connectionString="Data Source=localhost;  
    Initial Catalog=aspnetdb;Integrated Security=True"  
    providerName="System.Data.SqlClient" />  
</connectionStrings>
```

Audience Tips & Tricks?

- ◆ Who has a tip or trick I didn't mention?

Thank You

- ◆ Contact me at
 - paul@deeptraining.com
 - blog: aspadvice.com/blogs/plitwin
- ◆ Download materials (slides/samples)
 - www.deeptraining.com/litwin