

I'm a PHP Developer, Why Should
I Care About Microsoft?

A Microsoft primer for PHP devs

(or...Microsoft and PHP – a love story)



Who Am I?



Peter Laudati

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Borg Collective ID: X914BZ01

1998 Started working at Microsoft



Microsoft

Buildings 1-6, 12-17 ↑

Buildings 8-11, 22, 24 →

Buildings 18-21, 25 ←

Buildings 26-28, 40-43 →

Buildings 30-33 ↑

Executive Briefing Center ↑

Recruiting ←

Microsoft

Buildings 1-6, 12-17 →

Buildings 8-21, 25 ↑

Buildings 30-33 →

Buildings 40-44 ←

Executive Briefing Center →

Recruiting ↑

1998 Started working at Microsoft



MetroPark, NJ

1998 Started working at Microsoft



Edison & Iselin, NJ

1998 Started working at Microsoft



Edison & Woodbridge, NJ

1998 Started working at Microsoft



Exit 131, NJ

1999-2005 Worked on Enterprise server applications



I blog, therefore, I am

The screenshot shows a Windows Internet Explorer browser window. The address bar contains the URL <http://blogs.msdn.com/peterlau/archive/2008/04/11/the-new-look-of-jrzyshr-dev-guy.aspx>. The browser title is "JrzyShr Dev Guy : The New Look of JrzyShr Dev Guy". The page content includes a header with a paperclip graphic and the text "JrzyShr Dev Guy Peter Laudati's bits + bytes from exit 117...". A navigation menu contains links for HOME, EMAIL, ABOUT, RSS 2.0, and MY BLOG DASHBOARD. The main content area features a post titled "The New Look of JrzyShr Dev Guy" with the following text: "If you read my blog via its actual web site, you probably noticed some changes yesterday. After a while of planning and slowly putting the pieces into place behind the scenes, I finally completed an upgrade to the look-n-feel of my blog. For those of you who are following along in your RSS reader of choice, I've included some before & after screen shots below. First, I'll tell you a little bit about the new look, and then I'll explain how I did it for the benefit of others interested in customizing their Community Server-based blogs." Below this is another paragraph: "When I first started my blog in May of 2006, I knew it was going to be about technology. But I also wanted it to have a personal touch, one that would capture who I was and where I was from (New Jersey). When you tell people you are from New Jersey, they will inevitably crack all sorts of jokes about toxic waste, corruption, and the infamous 'what exit are you from' question. This was something I didn't discover until I moved out of the state to attend college at [Virginia Tech](#)." A third paragraph follows: "Perhaps I was naive throughout my youth, but I never realized the negative views people held of my state while growing up. This was probably because I grew up in the central part of the state away from the urban & industrial areas. It's not that I wasn't familiar with the gritty parts of the state that most visitors inevitably see when they travel the Jersey Turnpike, or arrive at Newark Airport on their way to New York City. How could anyone from Jersey *NOT* know the beauty that is Exit 13?! Rather, I knew those areas were only a small part of this beautiful state that has so much more to offer." To the right of the text is a photograph of an industrial facility with several tall smokestacks. The browser's status bar at the bottom shows "Internet | Protected Mode: On" and "100%".

<http://www.peterlaudati.com>

So much time  little to see!

So little time and so much to see!

My goals

- Show some cool stuff
- Tell you where you can get it
- Tell you where you can learn more
- Answer questions
- Go have a beer with all of you

Stuff we'll talk about

- Microsoft & Open Source
- PHP and IIS
- SQL Server 2005 Driver for PHP
- Microsoft AJAX Library
- Silverlight
- Expression Web 2.0
- ...

Linux

Samba

Mozilla

Apache

MySQL

PHP

Ruby

Python

Java

Eclipse

Open Source

Microsoft Open Source Software & Novell Interop Labs

OSS Lab: Redmond, WA

- Staffed by OSS and Linux experts
- 300 servers of varying types, Gumstix, Intel, AMD, Blades, HPC clusters, and IBM P6 series machines
- Highest computing density of any Microsoft Redmond lab
- Availability of over 340+ Linux Distributions
- Testing interoperability OSS and Windows Technologies
- Research on OSS technologies
- Performance testing of Windows and OSS stacks

Novell Interop Lab: Cambridge, MA

- 2500 sq feet of lab and office space
- Jointly staffed by Microsoft and Novell
- 80 servers running Intel Xeon dual and quad core technology and AMD Opteron dual core technology
- Testing interoperability of virtualization, ws-management and identity federation solutions
- SAMBA Interoperability testing

OSS Lab Projects

Past:

- Windows Media Player 11 interoperability
- Silverlight Firefox compatibility
- Silverlight /Moonlight implementation of common standard
- SQL Server drivers providing connectivity from Java or PHP
- Fast CGI hosting PHP and Python in IIS
- Vista compatibility with Firefox

Future:

- PHP Active Directory Integration
- PHP/Sharepoint Integration
- SugarCRM SQL Server Connectivity Collaboration
- Continue providing technical support to Apache (Build Support)

Present:

- Hyper-V Linux Interoperability
- Ws-man Compliance Tool System Mgmt interoperability
- PHP Interop: PHP application connectivity to SQL Server
- Apache Interop: ASF Technology Transfer
- CardSpace relying party
- Java/PHP/Ruby/C Interop
- HPC Linux/Windows environment
- Identity Integration, File Server Integration

PHP and IIS

PHP on IIS – A Brief History

- First, there was CGI
 - Invokes new process for each request
 - Easy to configure, pretty stable
 - SLOOOW due to overhead of process creation
- Then, ISAPI extension
 - Loaded in process
 - Better performance
 - Not stable if code isn't thread safe
- What's the solution?

The solution - FastCGI

- Extension to CGI that allows reuse of a process
- Easy to Configure
- Faster than CGI
- More stable than PHP on ISAPI
- Able to leap tall buildings in a single bound
- Can run non-thread-safe versions of PHP

More on FastCGI

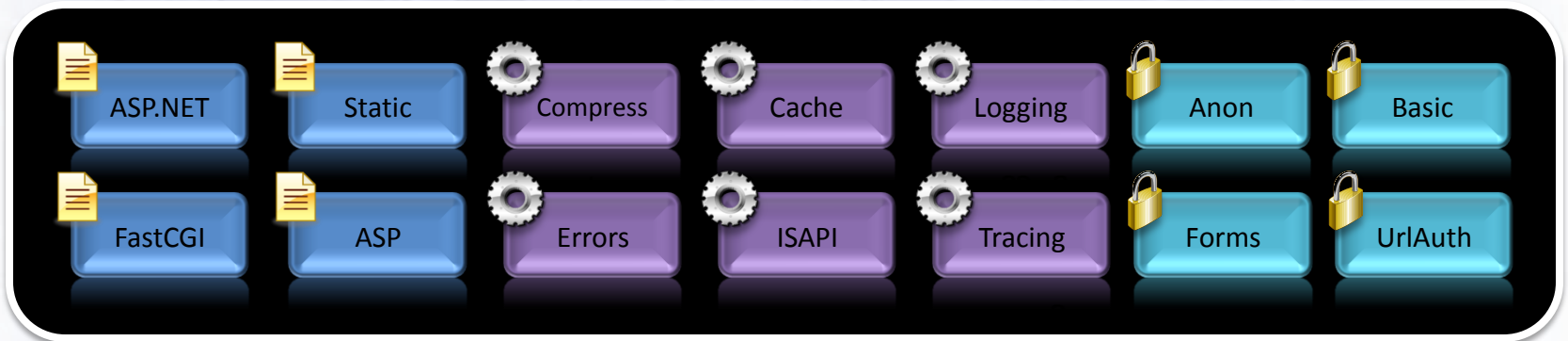
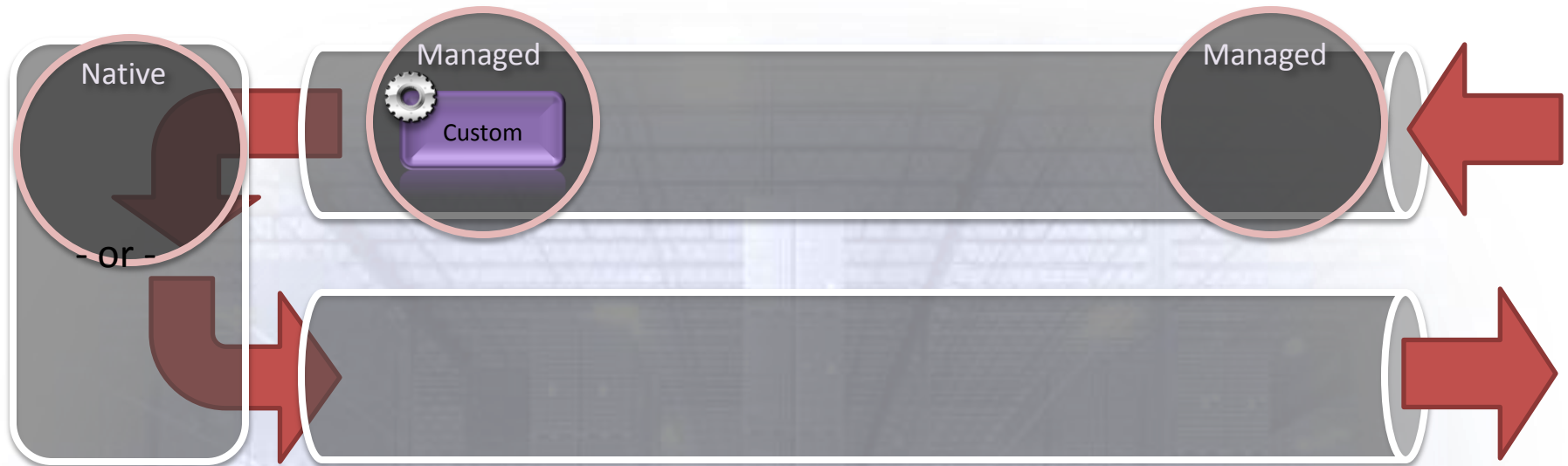
- Developed in close collaboration with Zend Technologies
 - Improvements in PHP engine for IIS with contributions and collaboration back to PHP Community
 - Zend Core Available for Commercially Supported PHP
- Available for IIS6 (Windows Server 2003) or IIS7 (Windows Vista SP1 or Windows Server 2008)
- Fully supported by Microsoft
- Where do I get it? <http://www.iis.net/php>

IIS7 Cool New Features

- Modular architecture
- XML configuration
- Remote management
- Advanced diagnostics
- Integration with Windows Media Server
- Can easily extend with managed code

New Modular Architecture

The integrated pipeline



Demo

Leverage the Platform

- Rich functionality in IIS7
 - Included modules such as Membership
 - Add-on modules from <http://IIS.net>
- SQL Server 2005 Driver for PHP
- Other Windows Applications
 - Active Directory
 - Exchange
 - SharePoint
 - Office

Add-On Modules

- Publishing
 - WebDAV - Released
 - FTP7 - Released
 - Frontpage Server Extensions - Released
- Media Pack
 - BitRate Throttling – Go Live
 - Playlists - CTP
- Other modules to come...

Good IIS and PHP resources

- IIS Authentication plugin for the Wordpress PHP blogging engine
 - <http://tinyurl.com/ytwndt>
- Installing PHP apps on IIS7
 - <http://channel9.msdn.com/Showpost.aspx?postid=356242>

SQL Server 2005 driver for PHP

SQL Server 2005 Driver for PHP

- Goal: Provide robust, scalable, and reliable SQL Server connectivity for PHP developers targeting the Windows platform
- Enterprise “abilities” to PHP/SQL Server Devs.
 - Reliability
 - Scalability
 - Maintainability
- Base the PHP driver's API on existing data patterns
 - API changes made based on community feedback during beta
 - For more info, see the team blog <http://blogs.msdn.com/sqlphp>
- Version 1.0 Released July 2008!

ASP.NET AJAX and PHP

What is AJAX?

- **Asynchronous JavaScript And XML**
- Client/server communication without loading a new page

What else does AJAX sometimes mean?

- DHTML: HTML + JavaScript behavior
 - Animations
 - Drag/drop
 - Show/hide details
- Partial page updates
 - Replace part of the page with UI from the server
 - Stock ticker, news headlines
 - Often with a timer
- AJA*: XML, HTML, text, JSON

What is ASP.NET AJAX?

- Microsoft AJAX Library
 - Cross-browser, cross-platform, cross-backend
 - Pure JavaScript
- ASP.NET AJAX Extensions
 - ASP.NET-only server controls
- AJAX Control Toolkit
 - Shared-source, community project, built on AJAX Extensions

Microsoft AJAX Library



Client

XHTML/CSS

Server-generated
Proxy Scripts

Microsoft AJAX Library

Components

Browser Compatibility

Networking

Core Services

Browsers (IE, Firefox, Safari, others)

AJAX Library Design Goals

- Framework for OOP in JavaScript
 - Namespaces, properties, events, inheritance, reflection, ...
- Encapsulation of controls/behaviors
 - Reusable script components, easy to associate with HTML elements
- Cross-browser abstraction
 - IE, Firefox, Safari, Opera
- Seamless integration with “web services”

Demo

Complex Object Support

```
public class Customer {
    public string FirstName {
        get {} set {}
    }

    public string LastName {
        get {} set {}
    }
}

public class CustomerService : System.Web.Services.WebService {
    [WebMethod]
    public Customer GetCustomer(int id) {
        return new Customer("bill, "gates");
    }

    [WebMethod]
    public void UpdateCustomer(Customer customer) {
        // todo: update database
    }
}
```

Complex Object Support

```
<script language="JavaScript">
  function getCustomerInfo() {
    CustomerService.GetCustomer(123, onCustomerComplete, onTimeout);
  }

  function onCustomerComplete(results) {
    firstNameTxt.value = results.FirstName;
    lastNameTxt.value = results.LastName;
  }

  function updateCustomerInfo() {
    var customer = new Customer();
    customer.FirstName = "Bob";
    customer.LastName = "Jones";

    CustomerService.UpdateCustomer(customer, onUpdate, onTimeout);
  }
</script>
```

Microsoft AJAX Library

- Downloads, documentation, etc.
 - <http://ajax.asp.net>
- PHP for Microsoft AJAX Library
 - <http://codeplex.com/phpmsajax>
- Steve Marx's webcast
 - <http://tinyurl.com/2pwd5z>

Silverlight



Microsoft®
Silverlight™

Microsoft **Silverlight**

is a

**cross-browser,
cross-platform,
cross-device
plug-in**

for delivering
the next generation of
.NET-based

**media experiences
&**

rich interactive applications (RIAs)

for the **Web**

Silverlight Overview



Compelling Cross-Platform User Experiences

- Immersive media experiences & RIA
- Seamless, fast installation for end users
- Consistent experiences on Mac / Windows

Flexible programming model with collaborative tools

- Integration with Web technologies
- Based on the .NET Framework
- Role specific tools for designers / developers

Efficient, lower cost delivery, and more capable media

- HD to Mobile w/ SMPTE VC-1
- Broad media ecosystem
- Tools for live and on-demand publishing

Designer/Developer Collaboration



production



final result

design

production
specs

comb

final result
html \ css



Key technology aspects

- Silverlight asset delivered as text-based XAML
- XAML can come from static file or dynamic server code
- XAML defines UI and animations
- XAML events can be raised to code
- XAML can be changed at “runtime”

▪

Silverlight Development Model

JavaScript AJAX

- Supported with Silverlight 1.0 and 2
- Enables JavaScript to program both HTML and JavaScript together
- Fully supported with ASP.NET AJAX

.NET

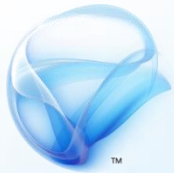
- Supported with Silverlight 2
- Cross platform version of the .NET Framework included with Silverlight
- Fully supports VB and C# development in the browser
- Supports dynamic languages (IronRuby, IronPython, etc)



Silverlight 2 Runtime Features

- 2D, Graphics
- Audio, Video
- Animations
- Text, Text Input*
- Controls*
- Layout*
- Styles/Templates*
- Data Binding*
- Networking
 - HTTP/S and Sockets*
- .NET Support*
 - C# and VB.NET*
- LINQ*
- XML APIs*
- Generics*
- HTML Integration*
 - JSON Serializer
- Local storage*
- Crypto APIs (AES)*
- Threading*

* New in Silverlight 2



Microsoft®
Silverlight™

Demo

Get Started!

1. Visit Silverlight site for samples, demos, videos, whitepapers
<http://www.silverlight.net>
2. Install the Beta 1 Runtime
<http://www.microsoft.com/silverlight/resources/installationFiles.aspx?v=2.0>
3. Install the Visual Studio 2008 tools
<http://www.microsoft.com/downloads/details.aspx?FamilyId=E0BAE58E-9C0B-4090-A1DB-F134D9F095FD&displaylang=en>
4. Install the Silverlight 2 Beta 1 SDK
<http://www.microsoft.com/downloads/details.aspx?FamilyId=4E03409A-77F3-413F-B108-1243C243C4FE&displaylang=en>
4. Expression Studio beta
<http://www.microsoft.com/expression/products/download.aspx?key=studio2beta>

General resources

- MIX 08 sessions
 - <http://sessions.visitmix.com>
- Channel 9
 - <http://channel9.msdn.com>
- PHP on IIS
 - <http://www.iis.net/php>



Questions?



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