



Internet Information Services 7.0 for ASP.Net Developers

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About Me

- 🍌 ASP.Net Code Monkey
- 🍌 VBUG North East Regional Coordinator
- 🍌 Live in Sunderland!
- 🍌 Huge Sunderland A.F.C. Supporter
- 🍌 Very Interested in Wartime exploits of 617 Squadron – The Dam Busters



Agenda

- Overview and Availability in Vista SKUs
- Architecture
- Administration
- Componentization
- Extensibility Model
- Troubleshooting and Diagnostics
- Configuration
- Features
- Unified Platform for Web Services and WCF
- Conclusions
- Questions
- Resources

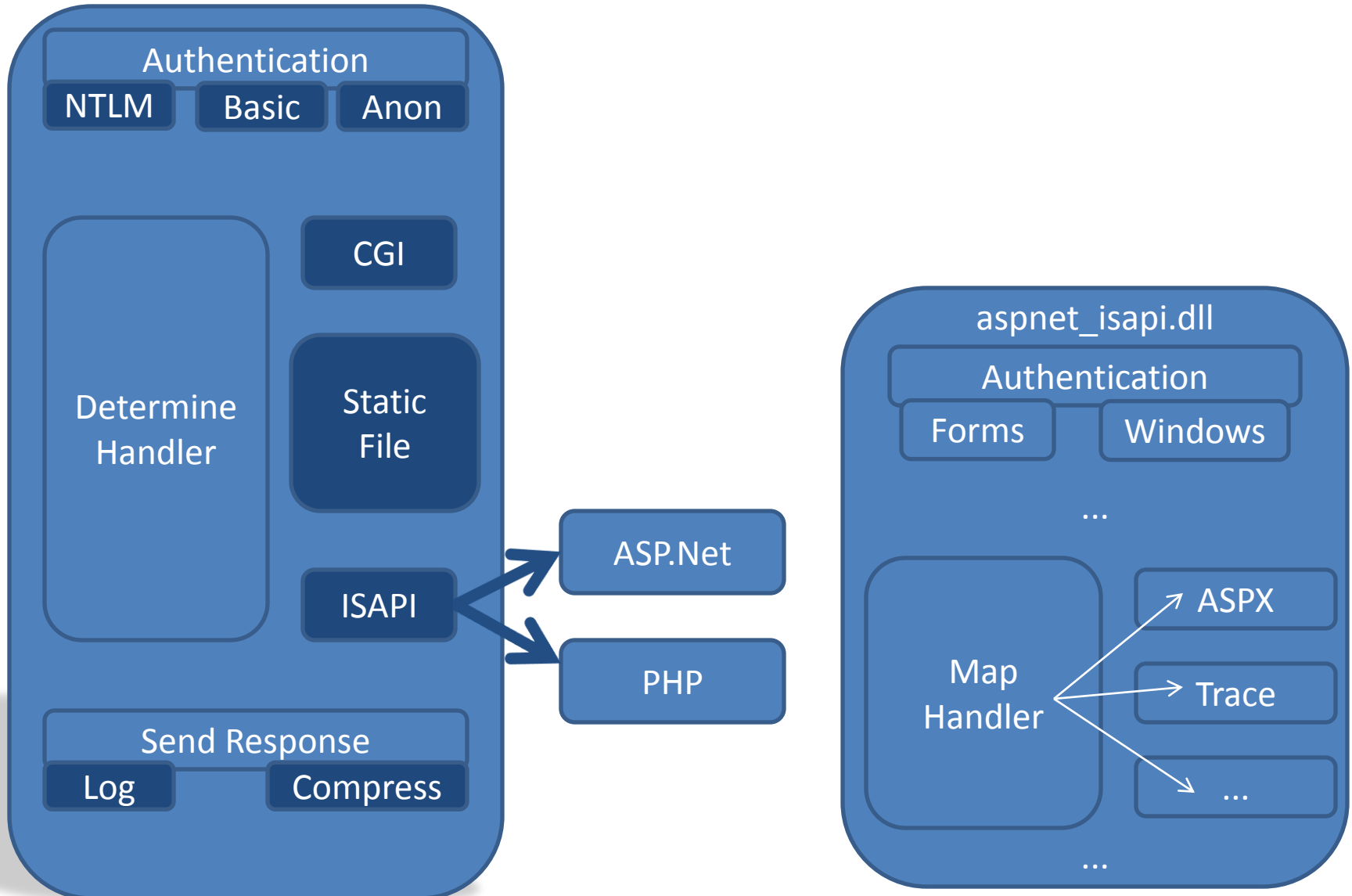
Overview

- Most significant release of IIS since IIS 1.0
- Available on Windows Vista and Windows Server 2008
- Go Live License on Windows Server 2008 Beta 3
- First time development and server platform versions of IIS aligned
- ASP.Net Integrated Pipeline
 - New extensibility model
 - Expanded Productivity Support

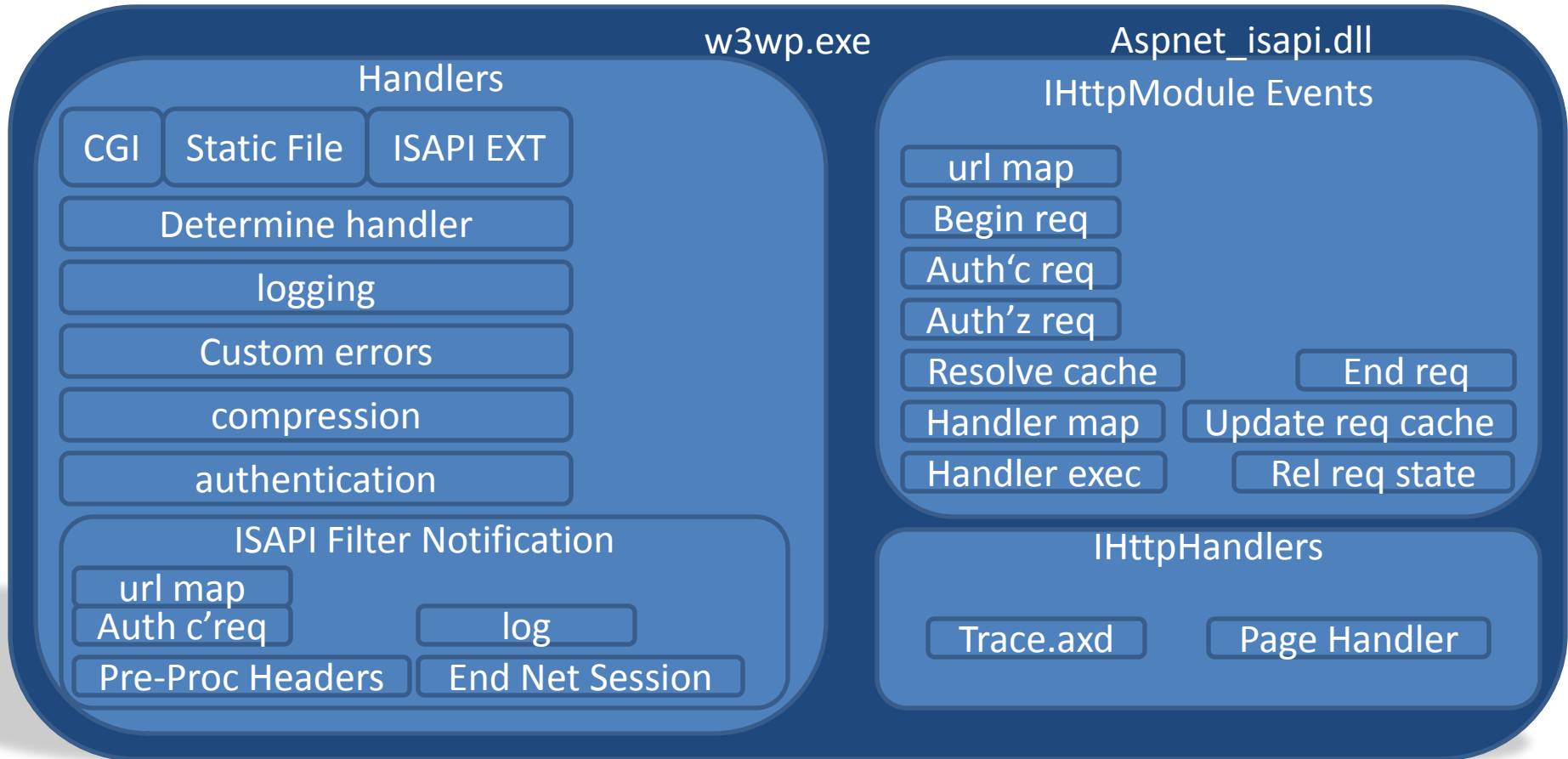
Availability In Vista SKUs

- Not Available in Vista Home Basic
- Parts Available in Vista Home Premium
 - No FTP Server, Advanced Web Authentication and Authorization, and Remote Administration
 - Simultaneous Request Limit = 3
- All elements of IIS7 found in Windows Server 2008 are available in the Vista Pro SKUs(Business, Enterprise and Ultimate) with the exception of Remote Administration

IIS6 Architecture

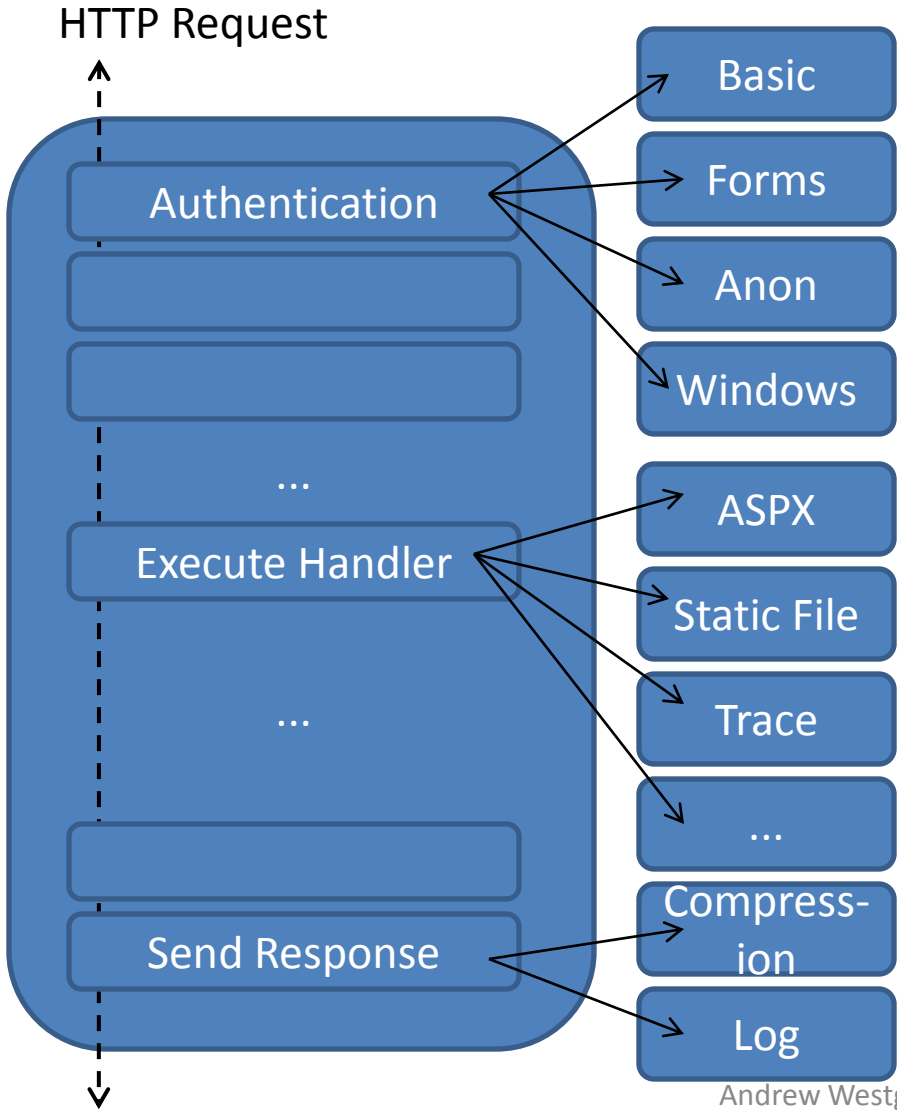


IIS6 Request Handling



http.sys

IIS7 Architecture

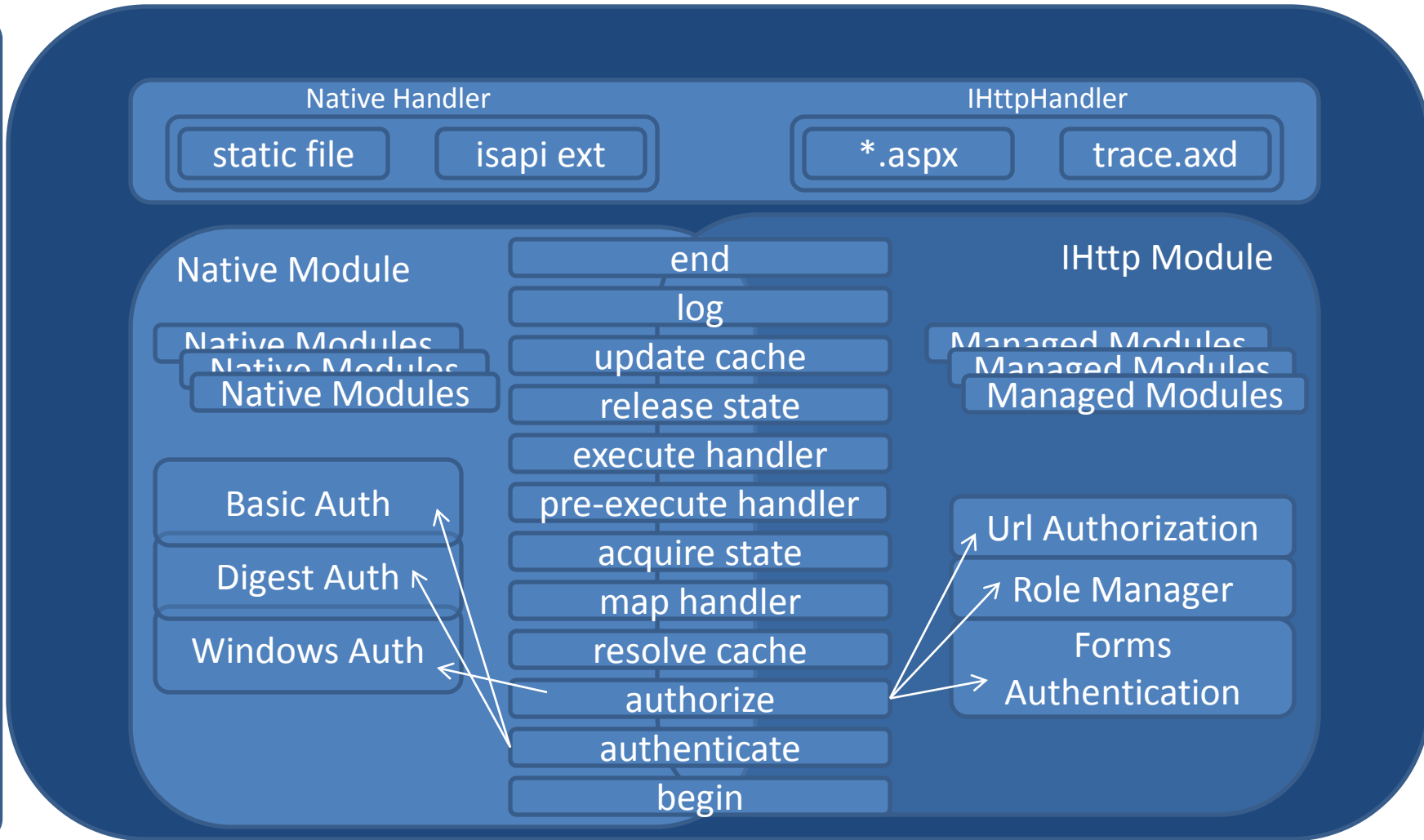


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IIS7 Request Handling

WAS



http.sys

Administration

- New Administration UI
- New Command Line Utility appcmd.exe
- New Managed DLL –
Microsoft.Web.Administration
- Can be Delegated
- Server can be managed Remotely

Delegated Administration

- Server Administration can be delegated via configuration
 - Allows Administrators to enable others to control aspects of configuration
- Remote Administration of IIS in Windows Server 2008

Demo – IIS7 Administration

- Administration UI and AppCmd
- Review of Microsoft.Web.Administration

Componentization

- IIS7 Now Fully Modular
- Can have very small server footprint
- Customise to only install/enable features you want to have running
- Therefore only patch what you need/use

Components of IIS7

Security

BasicAuthMode

DigestAuthMode

WindowsAuthMode

CertificateAuthMode

AnonymousAuthMode

IPSecurityModule

UrlAuthorizationModule

RequestFilteringModule

Application Development

NetFxExtensibility

ISAPIModule

ISAPIFilterModule

CGIModule

ServerSideIncludeModule

ASP

ASP.Net

Health and Diagnostics

HttpLoggingModule

CustomLoggingModule

RequestMonitorModule

HttpTracingModule

ODBCLogging

LoggingLibraries

FTP Publishing

FTP Server

FTP Management

Performance

Static Compression

Dynamic Compression

Management

ManagementConsole

ManagementScripting

ManagementService

Metabase

WMICompatibility

LegacyScripts

LegacySnap-In

Common HTTP Web Server Components

StaticFileModule

DefaultDocumentModule

DirectoryListingModule

HttpRedirect

CustomErrorModule

Windows Process Activation Service

ProcessModel

NetFxEnvironment

ConfigurationAPI

Configuration

- No more Metabase!!!!
- Compatability – old metabase pushed to new config – same property names
- Central File – ApplicationHost.config
 - Strongly Typed Schema
 - Use same methodology as ASP.Net .config files
- Distributed Configuration

Demo - Configuration

- Let's take a look at the new configuration system.

Extensibility Model

- IIS6 – ISAPI Filter and Extensions
- IIS7 – Brand New Win32 Native Interface
 - All IIS Modules written using this interface
 - IIS Team uses this API just like you WILL!
 - Full ASP.Net 2.0 Support
 - IHttpModule available supported today!
 - ASP.Net 2.0 Handlers run same as today
 - IIS Manager (UI)
 - Extend using .Net 2.0
 - Diagnostics
 - Add own events directly into pipeline (System.Diagnostics)

ASP.Net HttpHandlers and HttpModules

- HttpHandler
 - Similar to ISAPI extensions
 - Can be called via url
 - Act as target for incoming requests
- HttpModules
 - Plug into the ASP.Net request processing pipeline
 - Registered for certain events
 - As the event occurs the ASP.Net invokes the module so it can handle the request

Demo Extensibility

- Build Image Copyright Handler
- Build Module and Integrate with IIS7 Admin

Troubleshooting and Diagnostics

- Real Time State Information Available
 - Current Processes Running
 - Application Pools Process ID
 - Currently executing requests
 - AppDomains loaded
- Real-time starting and stopping of sites
- Failed Request Tracing
- Extensive Custom Errors

Failed Request Tracing

- Traces all requests through Pipeline
- Automatically Enabled on IIS7
- Easily identify failing, stuck requests
- Identifies time take in each module, helping analyzing long running requests

Custom Errors

- Much more detailed
 - Language specific (Accept-Encoding)
 - Time
 - URL
 - Current Module
 - Response Status, Sub-Status
 - More Information – Detailed steps to fix problem where available

Demo Troubleshooting

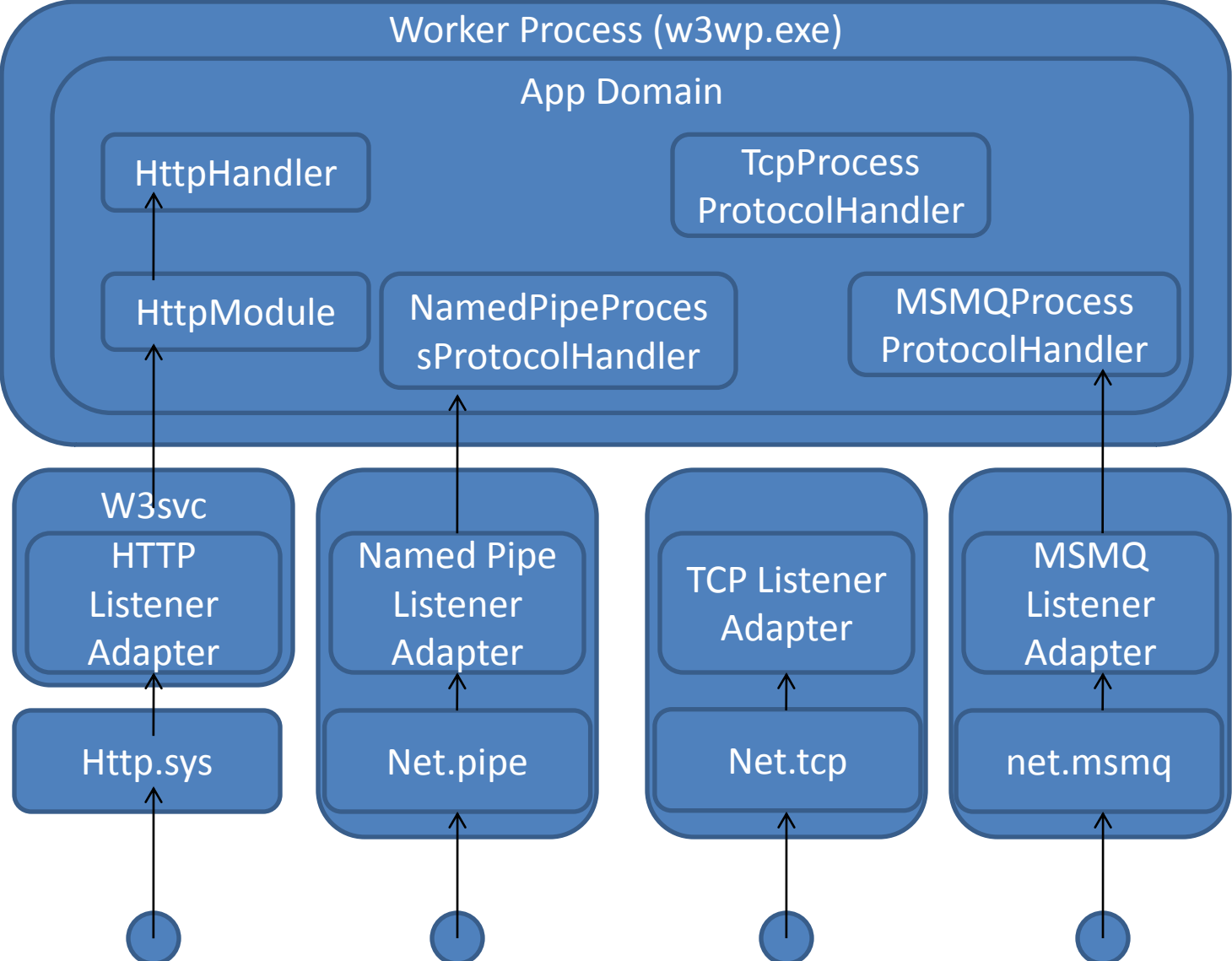
- Custom Error Pages
- Failed Request Tracing

Unified Platform for Web Services and WCF

- Host WCF Services using Windows Activation Service (WAS)
- Supports Non-HTTP Protocols such as
 - Named Pipes
 - TCP
 - MSMQ
- Provides features for idle-time management, health monitoring, process recycling

WAS Processing of Service Requests

Windows Activation Service (WAS)



Conclusions

- Major Release – Most Significant since 1.0
- Fully Customisable – Managed and Native
- New Pipeline
- ASP.Net Fully integrated
- First time desktop and server versions aligned
- Go and have a Look

Questions

- Now
- Via my blog –
<http://www.andrewwestgarth.co.uk/Blog>
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Resources



- Windows Server 2008 Beta 3 –
<http://www.microsoft.com/technet/prodtechnol/beta/lhs/default.mspix>
- IIS Resources – <http://www.iis-resources.com>
- Help with F5 debugging on Vista –
<http://mvollo.com/blogs/serverside/archive/2006/12/28/Fix-problems-with-Visual-Studio-F5-debugging-of-ASP.Net-applications-on-IIS7-Vista.aspx>
- MSDN Magazine Article –
<http://msdn.microsoft.com/msdnmag/issues/07/03/iis7/default.aspx>