Foreword

ASP.NET IS THE FASTEST-GROWING Web development platform in the world today. It powers some of the biggest Web sites and applications in the world—a shortlist of well-known customers includes Dell Computer, Merrill Lynch, the London Stock Exchange, NASDAQ, JetBlue Airways, USA TODAY, Home Shopping Network, Weight Watchers, Bank One, and Century 21.

Every day thousands of new developers begin learning ASP.NET for the first time—supported by an incredible developer community of books (170+ different ASP.NET books have been printed), user groups (more than 150+ worldwide), forums (450,000+ registered users on the www.asp.net public forums), e-mail–based listservs, and Web logs.

Our goal while building ASP.NET version 2.0 has been not only to develop a product that makes this developer community proud but also to build a platform that defines a new level of rich features and functionality against which all Web development is measured.

Specifically, we've focused our work on ASP.NET 2.0 around three core themes.

Developer productivity: Our goal with ASP.NET 2.0 is to enable developers to build full-featured Web applications faster than ever before. We've spent countless hours talking with developers and looking at existing applications to identify the common features, patterns, and code that Web developers build over and over today. We've then worked to componentize and include these features as built-in functionality of ASP.NET.

For example, ASP.NET 2.0 now includes built-in support for Membership (username/password credential storage) and Role Manager services out of the box. The new Personalization service enables quick storage and retrieval of user settings and preferences—facilitating rich customization with minimal code. Use of master pages allows flexible page UI inheritance across sites. The navigation system helps developers quickly build menu-associated link structures. Themes enable flexible UI skinning of controls and pages. And the new Web Parts framework offers rich portal-style layout and end-user customization features that would otherwise require writing tens of thousands of lines of code.

Augmenting all these great infrastructure features are more than 50 new server controls in version 2.0 that enable powerful declarative support for data access, security, wizard navigation, menus, tree views, portals, and more. For example, building a page with a `DataGrid` in ASP.NET 1.0 bound to a three-tier business object that was filtered using a drop-down list, while also supporting paging and sorting and editing, would have required approximately 100 lines of code (and probably a few trips to the help documentation). In ASP.NET 2.0, this scenario can be accomplished without requiring a single line of procedural code (the new data controls do all the work)—and literally can be built in seconds using the new edition of Visual Studio development tools.

The collective arsenal of features now available to developers in ASP.NET 2.0 is truly awesome. With it, projects that used to take days or weeks can now be done in as little as a few hours.

Administration and management: Our goal with ASP.NET 2.0 is to ensure that administrators love ASP.NET as much as developers do. This means building features that further enhance the deployment, management, and operations of ASP.NET servers.

In ASP.NET 2.0 we've built new configuration management APIs, enabling users to programmatically build programs or scripts that create, read, and update `web.config` and `machine.config` configuration files. We've provided a new comprehensive administration tool that plugs into the existing IIS Administration MMC and enables an administrator to graphically read or change any setting within our XML configuration files. We've also added support for encrypting settings within `web.config` files, allowing you to easily save and manage sensitive settings like connection strings and passwords.

ASP.NET 2.0 will ship with a new application deployment utility that will enable both developers and administrators to pre-compile a dynamic ASP.NET application prior to deployment. This pre-compilation automatically identifies any compilation issues anywhere within the site and also enables ASP.NET applications to be deployed without any source being stored on the server (even the content of `.aspx` files is removed as part of the compile phase).

We are also providing new health monitoring support so that administrators can be automatically notified when an application on a server starts to experience problems. New tracing features will help administrators capture runtime and request data from a production server to better diagnose issues.

Speed and performance: ASP.NET is already the world's fastest Web application server. Our goal with ASP.NET 2.0 is to make it even faster.

ASP.NET 2.0 is now 64-bit enabled, meaning it can take advantage of the full memory address space of new 64-bit processors and servers. Developers can copy existing 32-bit ASP.NET applications onto a 64-bit ASP.NET 2.0 server and have them automatically be JIT compiled and executed as native 64-bit applications (no source code changes or manual recompile are required).

ASP.NET 2.0 also now includes automatic database server cache invalidation. This powerful and easy-to-use feature allows developers to aggressively output cache database-driven page and partial page content within a site—and have ASP.NET automatically invalidate these cache entries and refresh the content whenever the back-end database changes.

At the same time that we've focused efforts on making ASP.NET even better, we have also made major improvements to the Web development support within Visual Studio. This includes much better WYSIWYG designer support—to avoid any HTML reformatting of source, to provide full XHTML compliance of markup, and to provide a WYSIWYG designer for the new ASP.NET 2.0 Master Pages feature. It includes major project system enhancements—FrontPage Server Extensions are no longer required to create, edit, and run applications (just point at a file system directory and you can begin editing). It includes improvements to the code editing and code separation models, making code-behind much more elegant and robust. It includes built-in support for Section 508 and WCAG accessibility validation. It includes localization support to enable developers to easily build Web applications that can dynamically target a variety of

languages and cultures. And it includes rich support for data access—leveraging the new ASP.NET 2.0 data controls to enable easy and powerful data UI generation against three-tier business objects with no code required. The combination of ASP.NET 2.0 and the new Visual Studio development tool features complement each other perfectly, enabling developers to quickly and easily build applications like never before.

This book provides an excellent guide for developers exploring and learning the amazing functionality that will be available with this new generation of Microsoft Web products. You'll be able to use this book as a valuable resource to gain insight into the new features—and to learn just how much easier and better Web development will be when ASP.NET 2.0 is released.

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