

# **.NET Framework 2.0: A Versatile, Responsive IT Solution for Today's Demanding Businesses**



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***Adapting to change has always been important to business success. In today's business environment, staying ahead means continuously adapting to change—and making change work in your favor. To do that, business leaders need IT systems that support and enable their strategic decisions. With .NET 2.0, this goal seems more achievable than ever before. Find out what's new in this framework and how you can benefit.....***

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## **Introduction**

Each year, thousands of companies turn to .NET—the Microsoft strategy for the implementation of Web services—to connect people, information, systems, and devices through innovative software solutions. Integrated across the Microsoft platform, .NET empowers businesses to quickly build, deploy, and manage connected, security-enhanced solutions. In short, .NET helps businesses realize the promise of information anytime, anywhere, on any device.

## **What is .NET**

.NET is the Microsoft Web services strategy to connect information, people, systems, and devices through software. Integrated across the Microsoft platform, .NET technology provides the ability to quickly build, deploy, manage, and use connected, security-enhanced solutions with Web services. .NET-connected solutions enable businesses to integrate their systems more rapidly and in a more agile manner and help them realize the promise of information anytime, anywhere, on any device.

## **Features: .NET 2.0**

- ❖ **Reduce the number of lines of code required by 70%.** The declarative programming model freed developers from having to write reams of code, but there are still many scenarios where this cannot be avoided.

## Solution Overview

### **Abstract**

This white paper discusses some of the key features of .NET framework 2.0 outlining some of the business benefits that come with those features.

### **Benefits**

- Reduced cost of ownership
- Improved customer service by faster time to reach market
- High developer productivity
- Fast, secure & dependable network communications
- Enables new business opportunities and integration of systems regardless of the platform they are running on.
- Enables IT organizations to extend existing applications to integrate with business partners.
- Improved application performance, security, and easier deployments.
- Opening the door to new business opportunities by making it easy to connect with partners.

### **Software and Services**

Microsoft Windows® 2003  
Advanced Server operating system with Internet Information Services  
Microsoft SQL Server™ 2005  
Microsoft .NET Framework 2.0

- ASP.NET
- Common Language Runtime

- ❖ **Localization.** As more and more companies reach out to other countries for business, creating global Web applications with Microsoft ASP.NET is becoming more and more important. ASP.NET 2.0 makes it even easier to provide support for multiple cultures and locales through improved runtime and tool support.
- ❖ **Personalization.** .NET 2.0 greatly simplifies and enhances personalization by providing integrated controls and functions, which are designed specifically to support each phase of the personalization process. From an ASP.NET 2.0 perspective, the three main areas of personalization support are membership, profiles, and Web Parts, providing a rich personalized experience. Development of portals like <http://my.msn.com> has become easier and more maintainable with .NET 2.0.
- ❖ **Interoperability, Integerability & Extensibility.** Web services are revolutionizing how applications talk to other applications—or, more broadly, how computers talk to other computers—by providing a universal data format that lets data be easily adapted or transformed. Based on XML, the universal language of Internet data exchange, Web services can communicate across platforms and operating systems, regardless of the programming language in which the applications are written.
- ❖ **Portability: Use a single control set for all devices.** Mobile devices are becoming more pervasive, with an increasing number of new devices. Many of the server controls render appropriately for small screens, but there are two major problems with the current support for mobile devices:
  - Having a separate set of server controls purely for mobile devices is not only confusing but also costly, and
  - Adding support for new devices requires additional development work and maintenance. ASP.NET 2.0 will provide a single set of controls and an extensible architecture to allow them (and other controls) to support multiple devices.
- ❖ **Provide the fastest Web server platform.** Although ASP.NET 1.0 offers a fast server platform, ASP.NET 2.0 will improve areas such as application start-up times and provide better application tracing and performance data. Innovative caching features will enhance application performance, especially when SQL Server is used.
- ❖ **Provide easier and more sophisticated management features.** Administration of ASP.NET applications under version 1.x required manual editing of the XML configuration file, which is not a great solution for administrators. Version 2.0 brings a graphical user interface–based administration tool that is integrated with the Internet Information Services (IIS) administration tool.

**Localization:**  
*Implementation of localization into your applications has become a necessity rather than an added feature. .NET 2.0, developing internationalized applications is easier than ever before.*

**Personalization:**  
*Development of portals like <http://my.msn.com> has become easier and more maintainable with .NET 2.0.*

**XML Web services:** *It allows applications, services, and devices to work together as connected solutions to enable users to act on information from smart devices. These connected solutions move the Web beyond the browser to simplify users' lives and help businesses run better.*

- ❖ **Easy implementation of entire scenarios.** The better management features are built on top of a management application programming interface (API), allowing custom administration programs to be created. Along with application packaging this will provide support for easily deployable applications, with or without source.

## **Business Benefits**

- ◆ **Increase developer productivity.** This partly relates to reducing the amount of code required but is also affected by more server controls encompassing complex functionality, as well as providing better solutions for common Web site scenarios (such as portals and personalized sites).
- ◆ **Faster time to market.** All the above features ensure a lower time to reach market as compared to prevalent frameworks. Application features that used to be hard to implement, or required a 3rd-party component, can now be added in just a few lines of code using the .NET Framework. The .NET Framework offers over 4500 classes that encapsulate rich functionality like XML, data access, file upload, regular expressions, image generation, performance monitoring and logging, transactions, message queuing, SMTP mail, and much more.

## **What can you do with .NET 2.0**

- ◆ Intranet Portals
- ◆ Corporate Internet Portals
- ◆ Data Intensive Analysis Applications
- ◆ Secure e-Commerce Applications
- ◆ Extensible & Portable Web Services Applications
- ◆ Richer Windows Based Applications

..... And much more.

## **Frequently Asked Questions**

- ❖ **Migration from J2EE, .NET 1.x or other frameworks to 2.0.** Computer languages and frameworks evolve as the needs of the development community evolve. Microsoft ASP.NET is certainly no exception. ASP.NET 2.0 is the first major update to the ASP.NET framework and includes solutions to common problems encountered with ASP.NET 1.x as well as new features that greatly increase the flexibility and functionality of Web development on the .NET platform. **Why Migrate?**

- Improve the reliability and usability of Web applications.
- Reduce the number of lines of code you have to write in common scenarios.

*“We recently migrated to .NET 1.x, Do I need to start all over again to move to .NET 2.0? Does that mean loss of investment that went into development of earlier versions?”*

*“Can I migrate from my existing J2EE environment to .NET 2.0 without an impact to my business?”*

- Offer user features to personalize Web applications
- Provide enhanced design features to generate consistent layouts and design. more and more companies reach out to other

❖ **Total cost of Ownership.**

## ***Calance capabilities***

- ◆ **Advanced Technology Group.** Calance has constituted an Advanced Technology Group for .NET 2.0, which is focused on doing an extensive research & development of cutting edge business application architectures in the .NET 2.0 framework. The team also comprises of expert J2EE architects to develop custom migration solutions for customers who are planning to migrate from J2EE to .NET 2.0.
- ◆ **Rational Unified Process (RUP).** Calance after pioneering RUP approach to software development in various technologies like J2EE, .NET 1.x, has come up with a proprietary application development process especially to manage .NET 2.0 projects. This translates into providing our customers; the same level of delivery commitments in their .NET 2.0 projects. For more information about our migration solutions and the methodologies, refer to a white papers under .NET 2.0 on <http://www.calance.com>

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### **About the author**

Puneet Bindlish is currently working as a Senior Consultant in Calance's Advanced Technology Group for Microsoft Technologies. He has extensive experience in enterprise solutions and developing architectures for Microsoft Technologies especially .NET framework based applications. He has worked in the areas of software product development and solution implementations esp. in the areas of Business Intelligence & Enterprise Resource Planning. He has rich product development and implementation experience on some of the best products in this area viz. Oracle e-business Suite, Infinium, Hyperion (formerly BRIO) etc. He has worked extensively in some of the big corporations like Oracle Corporation, Infosys Technologies, e-enable Technologies. Also he has worked with clients in various sectors like Manufacturing, food etc. He has a proven track record of innovative processes leading to efficient project life cycles.

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