Integrating Microsoft-based solutions in heterogeneous environments

“In any industry, the CIO has to engage the hearts and minds of the executive team. But CIOs are ultimately judged by execution. Companies can find great thinkers anywhere; it’s really hard to find the people who can get stuff done.”

—CIO Magazine, February 15, 2001

Introduction

The opening act of the network-based economy is ending and Act II is about to begin. Consequently, it is critical that information technology (IT) systems be architected from an enterprise perspective—equipped to support advanced levels of service for core business processes, such as supply chain management, enterprise resource planning and customer relationship management. At the same time, enterprise infrastructures must be capable of handling the seamless integration of myriad software applications, middleware, operating systems upgrades and rapidly emerging Web-based and wireless technologies—all within complex, heterogeneous environments.

Now is the time for forward-thinking organizations to align key business initiatives and prepare their IT infrastructures for the new age of e-business.
Act II: Next-generation e-business

The first phase of e-business found companies scrambling to secure a presence on the Web and manage the explosion of Internet, extranet and intranet sites that seemed to materialize overnight. It was a time of trial and error and disjointed “short-term fixes” that took enterprise IT departments by surprise.

The next phase of e-business will focus on solving core business issues, making information more accessible and usable, personalizing transactions and increasing the operational focus of the Internet. Organizations will learn how to combine their business and IT knowledge to deliver better levels of service, improve processes and leverage the power of next-generation networks.
Organizations everywhere are striving to get closer to their customers while reducing resource expenditures. Accordingly, they are increasing their reliance on IT in order to offer higher levels of customer service, improve employee support and build stronger connections with partners and suppliers.

With this in mind, it is critical that IT initiatives result in a robust enterprise infrastructure designed to support new technologies such as wireless and mobile systems and standards-based computing platforms. These systems will need to sustain multiple e-business solutions, including supply chain management, enterprise resource planning, knowledge and content management, business intelligence and customer relationship management.

Getting well-positioned for next-generation e-business requires tight integration of applications and data, a stalwart infrastructure and a keen understanding of the economic and technological pressures that can ultimately threaten tomorrow’s enterprise environments.

IT departments must evaluate and stabilize their current systems while simultaneously equipping themselves for fast growth, heightened business activity and rapidly evolving technologies.

Integration: As companies continue to embrace e-business, innovative leaders are widening their focus to include not only e-commerce, but the business as a whole. They know that integrated systems must provide common security features and leverage common databases — across the enterprise — from manufacturing to distribution to sales to service. They also know that enterprise applications must work together to reduce redundant data while supporting transactions that flow into, through and out of all channels. Network fractures, many of which occur during decentralization, must be mended. In order to operate as a network-based enterprise in a Web-pervasive world, processes and information must be unified to align with the Web — the overarching integration medium.
Building the right infrastructure: Your e-business infrastructure must be ready to sustain increased workloads from Web servers, middleware, storage devices and the tools that manage the network itself—end-to-end. At one end are suppliers, distributors, regulatory agencies, licensing boards—entities outside of your firewall. At the other end, you have an outbreak of devices—PCs, personal digital assistants, cell phones, wireless laptops and more. To achieve truly open, interoperable, any-to-anything computing, you need to ensure your enterprise class software and hardware is based on open standards.

Accelerating business activity: The reality is that most e-business infrastructures, no matter how sophisticated and scalable, are not ready for the avalanche of activity that lies ahead. Many, in fact, are struggling simply to keep up.

The magnitude and complexity of what tomorrow’s environments will need to accommodate—heightened connectivity and enormous amounts of realtime data—is far more than anyone could have anticipated. The questions for many are, which technologies will come, which will go, and which are here to stay? The list of contenders is long: wireless, optical, mobile, Extensible Markup Language (XML), universal Net, .NET, Microsoft® Windows NT®, Windows® 2000. The list goes on and on.

It is not surprising that many companies are asking themselves what can we do to keep up with dynamic, high-velocity change? And, how do we equip our enterprise for next-generation e-business?
The VP of operations in a global manufacturing corporation wants to share raw material inventory data with a supplier and scheduling information with a partner. The shipping and fulfillment manager wants to have up-to-the-minute status via a security-rich Web site.

The VP of operations, the manager of shipping and fulfillment, the IT manager, and various supply chain constituents meet to plan strategy. It is soon determined that numerous applications are in use — across departments, geographic locations and partner sites, and across back end systems and equipment. These applications have different user interfaces, access different databases and use different security models. With this in mind, the team prepares to reengineer their company’s supply chain processes and establish an e-procurement system — all while ensuring that current enterprise systems are equipped to handle such a transformation.

Once these initiatives are completed, sales reps will be able to confirm orders and shipping dates in realtime through the shipping and fulfillment systems — even in unusual situations. For example, the fulfillment system may indicate that an extremely large order will require more raw materials than the usual supplier is able to provide. By way of an e-procurement system, the company can find and secure a price from an alternate supplier, offer a price quote and confirm a delivery date — almost immediately.

As organizations like this one aim to heighten operational synergies, optimize resources and reduce costs, they must evaluate their supply chains to find new ways to streamline processes and create lasting business value. At the same time, they must strive to elevate customer satisfaction and fortify relationships with remote partners.
As businesses increase their reliance on the Internet, management teams must consider new ways of bringing products and services to market while extending their reach to vendors, partners and customers. Microsoft has secured a strong position in the marketplace—and in most networks—with a range of innovative technologies that can help today’s enterprise infrastructures respond rapidly to changing market forces with high degrees of reliability, security and scalability.

IT environments must also afford efficient management and ease of use, support for the latest advances in networking and server hardware, and the ability to accommodate evolving next-generation e-business strategies. To help manage the inherent complexities and risks associated with e-business integration and systems management, many companies are turning to experienced vendors like IBM.

Mobilizing productivity and profits

Wireless technology will forever change the way we work and communicate. The benefits are still materializing, but what we have seen to date is compelling.

When an industrial equipment services organization outfitted its maintenance crews with mobile devices, the company achieved far better results than were ever imagined. Each maintenance crew member received a ruggedized, hand-held device equipped with a variety of communication and dispatching capabilities. The crew’s productivity levels quadrupled almost immediately. Based on these results, the organization has commissioned IBM—using Microsoft tools—to enhance current mobile operations. It is expected that the benefits realized by these initiatives will continue to grow and provide increasing levels of business value.
“Connections with buyers, suppliers and customers will be elastic and ephemeral, expanding, contracting or disappearing as the need arises or wanes.”

— CIO Magazine, 2001

Most enterprises operate amid divergent business processes scattered across units and departments — placing multiple demands on IT infrastructures. Nonetheless, these organizations must be ready to respond fluidly and precisely — despite disparate locations, technologies, devices and network systems.

In order to take full advantage of latest technology offerings, IT departments must also integrate assorted Microsoft technologies into increasingly broad, complex and heterogeneous environments — all without abandoning mission-critical operations. Companies are developing significant enterprise applications based on Microsoft products.

IBM Enterprise Services for Microsoft Technologies (ESMT) has helped many organizations worldwide address complex integration issues and realize the results of a tightly aligned e-business infrastructure supported by various Microsoft and other enterprise-based technologies.

Information on demand — anytime, anywhere

The ability to provide your salesforce with critical realtime access to your enterprise network when they need it and where they need it is the future of your business.

Consider a day in the life of a salesperson who spends most of her time on the road. She travels the globe — sometimes for weeks at a time. Although she spends very little time in her office and is most often miles away from the company network, she needs continuous access to the tools and applications that reside there.

She requires information and global access on demand — e-mail, instant messaging, calendars, pricing and inventory information, order applications, sales force automation and presentation tools — even realtime reports. Without them, her chances of closing the “million-dollar deal” will be seriously hindered.

An end-to-end enterprise infrastructure must empower the immediate, competitive needs of your salesforce. At any given time, a salesperson may have to use her mobile computing device to open a document required for a meeting, obtain pricing or place an order for a customer — from wherever she happens to be. She must also have easy access to inventory systems and key personnel.

Today’s e-business infrastructure must also be prepared to support new salesforce tools such as mobile computers loaded with multimedia applications for running Web-based, interactive sales presentations.
Microsoft offers a wide range of products, including Windows 2000; Microsoft Commerce Server, Biztalk™; Microsoft SQL Server™ and Microsoft Exchange 2000™ e-commerce solutions; and a range of mobile devices and technologies. The best way to prepare for the ongoing use and adoption of these technologies is to migrate to Windows 2000—the foundation for most other Microsoft offerings. Since Windows 2000 is designed to manage IT systems with greater efficiency, reliability, manageability and scalability, it is obvious why more and more companies are moving in this direction.

With such an intriguing array of features, capabilities and possibilities available, the migration to Windows 2000 will arguably be more complex than any prior Operating System/Network Operating System upgrade. To ease the transition, many organizations are choosing to leverage the expertise of specialized, Microsoft-focused solution providers—experts who employ migration methodologies that ideally involve five key stages: analysis and strategy, architecture and design, implementation planning, development and implementation—each designed to manage risk and accelerate deployment.

Beyond the operating system, companies may want to leverage the growing number of Microsoft technologies while simultaneously maintaining interoperability. The onus is on these organizations to seamlessly integrate these technologies, upgrade them and manage them in an end-to-end environment. Since achieving high degrees of integration is a difficult task, companies can benefit from expert assistance in integrating and deploying Microsoft solutions across the enterprise. This will help ensure a timely, reliable, “start to finish” integration plan.
Given the mounting complexity of today’s applications and PC/LAN/WAN computing environments, application deployment is becoming more complicated and time-consuming. As a result, many businesses are implementing server-based computing (SBC) solutions—a model in which applications run completely on the server.

SBC models allow systems managers and IT departments to manage Windows-based applications, providing application access to thousands of workstations from a single point, thus enhancing Windows 2000 terminal server environments. In these cases, the deployment of Windows-based applications—across the enterprise to heterogeneous desktop environments—can be accomplished much more quickly.

Before transitioning from a traditional computing environment to a SBC model, businesses can benefit from detailed enterprise assessments and consulting, as well as a customized architecture. Citrix Systems, an industry-leading SBC solutions provider, specializes in equipping Windows 2000 environments with the latest tools. In conjunction with IBM Enterprise Services for Microsoft Technologies and Citrix, organizations can profit from the design and implementation of tailored, best-of-breed SBC solutions.
“New employment models, tight global labor markets and the infusion of young IT sophisticates will challenge the ways in which IS organizations coordinate work, satisfy employees, and measure contribution.”

— CIO Magazine, 2001

There is little question that IT will continue to be driven by investment decision justification algorithms, performance improvement requirements and enterprise risk management concerns. In fact, according to Gartner, levels of IT scrutiny are on the rise.

In order to alleviate pressures and ambiguities, consider forging an alliance with an enterprise integration specialist who can help you achieve success by assisting you with the following challenges:

*Plan for future technologies*— You want to build an infrastructure that is prepared to exploit a spectrum of technologies...one that is reliable, security-rich and capable of handling rapid change. How will you ramp up your systems accordingly? What impact will this have on your future strategies?

*Accommodate a host of contrary needs*— You need to consolidate your IT resources—both hardware and people—while optimizing customer reach, support and satisfaction. You must also strive to enable mobile applications and devices across ever-expanding areas while continuing to maintain control and optimum protection. How will you integrate and manage these changes despite conflicting requirements?
Prioritize and recentralize—With numerous domains and scattered departmental servers, having a centralized method for support and standardization is key. How will you respond—for the good of the enterprise—while maintaining “healthy” levels of business-unit autonomy?

Consolidate your servers—You need to maintain control, simplify maintenance and support requirements, and reduce the physical number of boxes tied to your network. To do this, you must first consolidate e-mail, database and file servers. How can you accomplish this—without interruption—while at the same time enhancing service levels across your enterprise?

Integrate your infrastructure—Hardware and platform introductions must interface properly with your management software. If you rollout Windows 2000, will your existing hardware and applications work well with it? What hardware and applications need to be upgraded? Will your end users still be able to use their scanners and printers without disruptions?

Integrate your applications—New systems should receive and send data to existing applications in such a way that they maintain business-process stability. Are you confident that your plan will overcome interoperability issues?

Successfully deal with change management—How can you assert positive change while alleviating downtime, preserving data, reducing the number of calls to the help desk and training people on the new system? In short, how can you introduce new technologies while maintaining or improving user satisfaction?

Provide high availability—Superior availability and reliability means around-the-clock access. How can you accomplish your high-availability goals in a budget-conscious way?

Enhance user satisfaction ratings—Enterprise demands are relentless, management requirements are high and overall tolerance for anything short of seamless and perfect is low. How will your department rate against mounting scrutiny?

The bottom line—Everything must work smoothly—on time, on budget and on target.
IBM Enterprise Services for Microsoft Technologies (ESMT) will provide specialized and comprehensive IT and application development (AD) services to help your enterprise succeed in the deployment and integration of Microsoft-based technology solutions. Our people are ready to help you achieve your infrastructure goals—from simplifying your environment to reaching higher service levels, adding functionality, and enhancing enterprise security features. Additionally, we can leverage our understanding of your industry’s needs in order to plan, develop and deploy custom applications that are designed to meet the unique demands of your enterprise.

We specialize in servicing and supporting a broad range of Microsoft business products—from operating systems to various types of servers, desktop applications and application development offerings. ESMT infrastructure specialists are skilled in designing, integrating and implementing the Microsoft platform including the Windows operating system and the Exchange e-mail system. These professionals are prepared to expertly evaluate your current environment—comparing it to what you want and what you need—and design a solution and implementation plan that will increase impact while reducing disruption.

Our ESMT team also includes custom application-development specialists. Using core Microsoft products such as Visual Studio®, SQL Server, COM+ and Visual SourceSafe®, they can help your organization create transaction-processing systems and business-intelligence systems that match virtually any requirement. Furthermore, we employ Commerce Server, BizTalk Server and accepted Internet standards such as XML to create powerful e-commerce solutions. We also utilize SharePoint™ Portal Server and the rich functionality of Exchange and the Web Store to build knowledge management systems. ESMT can bring these disciplines together to create wireless systems and/or high availability solutions when desired.
Enterprise Services for Microsoft Technologies is as committed to your IT systems as you are. We are also dedicated to:

- Addressing your e-business goals by leveraging and extending Microsoft technologies and our e-business expertise
- Offering flexible, customizable solutions designed to work within your existing architecture
- Transferring a comprehensive set of technical skills and knowledge to your IT professionals
- Delivering a seamless infrastructure designed for greater systems manageability
- Promoting business continuity and enhanced security features
- Supporting execution in a timely fashion
- Providing optimal enterprise solutions based on insight and experience gained through multiple Microsoft implementations.
We offer the following services and solutions:

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<th>ESMT Service</th>
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| Windows 2000 Migration Services                   | • Prioritizes desired benefits, evaluates your current environment and develops a plan to migrate to Windows 2000  
• Develops a solution design—with an enterprise perspective—and takes advantage of the Windows 2000 features which directly address your requirements  
• Builds, tests and deploys enterprise wide solutions                                                                                             |
| Microsoft Exchange 2000 Migration Services        | • Establishes new messaging solutions with a smooth migration path  
• Sets up a new Active Directory or integrates with the one you currently have  
• Addresses anytime, anywhere, any-device access to enhance productivity                                                                                             |
| Server-based Computing                            | • Designs and implements SBC solutions that reduce system management and hardware costs while enhancing software version control  
• Performs network evaluation and server configuration based on extensive experience                                                                                                                   |
| E-commerce Solutions for the Microsoft Platform   | • Offers comprehensive end-to-end solutions for Internet-based B2B and B2C transactions                                                                                                                                 |
| Mobile and Wireless Services for Microsoft Technologies | • From Web site design to integration with back-end systems, this offering is designed to produce a thorough, industrial-duty solution for bringing you closer to your customers and partners in a cost-effective way                             |
Summary
IBM is helping companies around the world deploy Microsoft-based solutions as part of an integrated, end-to-end enterprise infrastructure. IBM Global Services is made up of a diverse group of people who specialize in e-business, integration, infrastructure and implementation. Our portfolio of specialized and comprehensive deployment and integration services addresses the entire spectrum of next-generation e-business requirements—from analysis and strategy to design, implementation, planning and deployment.

Find out more
IBM Enterprise Services for Microsoft Technologies offers comprehensive service offerings to help you succeed in all areas of IT integration and Microsoft technology deployment.

For more information about IBM Global Services contact your IBM sales representative or visit:

ibm.com/services

For more information about IBM Enterprise Services for Microsoft Technologies visit:

www-1.ibm.com/services/bustran/enterprise.html
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