ORACLE AND MICROSOFT: INTEROPERABILITY PAYS BUSINESS DIVIDENDS

The world isn't flat—and no company runs its business on a single set of applications. But IT diversity doesn't have to be a showstopper to get more value out of your investments.

Welcome to the age of the heterogeneous business. Today, many companies—probably yours included—use a wide variety of packaged applications, legacy systems, Web-based applications and infrastructure to run it all. Perhaps your organization merged with or acquired another, or perhaps different divisions use different applications to serve customers or manage suppliers, or maybe the diversity exists on a global level—with different regions or countries supporting their own IT ecosystems. Regardless of how you got here, the realities of the heterogeneous business are real.

The promised payoff of adding each new system was tempting: Web-enable internal and customer-facing processes, provide better service, save money. Along the way, though, the cost and complexity of traditional approaches to integrating and managing all of these applications and systems from point to point exploded; increasing costs, complicating changes and hindering the ability to scale and expand. And it's not just the largest enterprises feeling the pinch. Even smaller companies are discovering that while adding new functionality to enterprise-wide processes brings tangible benefits, it comes at a price.

Yet companies need these applications and systems—whether from Oracle, Microsoft or other vendors—to work together efficiently and seamlessly to meet business objectives and respond to changes in competition or market trends. The challenge is clear: Companies must find a way to capitalize on technology diversity for the long term and have it work to their advantage.

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ORACLE AND MICROSOFT: FOCAL POINTS FOR INTEROPERABILITY

Today, many companies rely on Oracle and Microsoft. The ubiquity of Oracle database and enterprise applications and rapid growth of Oracle Fusion Middleware, along with Microsoft's Office desktop tools and Windows operating system, logically makes these products and technologies focal points of enterprise interoperability efforts. And as more corporations turn to service-oriented architectures (SOA) to improve business and IT alignment and resource re-use they will expect new service-oriented applications to deliver enhanced functionality across computing platforms.

While Oracle and Microsoft have been competitors historically and still compete in key areas such as the database, both companies recognize that their technologies must work together to drive business value—customers rightfully expect this. That's why Oracle has been a leading provider of enterprise applications for the Microsoft Windows platform for more than a decade. Indicative of this "co-opetition" is the fact that Oracle released its Database version 10*g* for Windows 2003 on the same day the new version of the operating system was made generally available.

BUSINESS BENEFITS

Rather than choosing one environment over the other—and ripping and replacing existing IT investments—savvy companies are using middleware to integrate Oracle and Microsoft technologies to:

- Quickly roll out new services to address market changes and opportunities
- Control rising total cost of ownership expenses by reducing IT complexity
- Capitalize on extensive in-house expertise in both platforms
- Strengthen the foundation for new technologies, such as Web services
- Improve productivity with familiar desktop tools that connect with enterprise resources

When focusing on interoperability between Oracle and Microsoft, there are three key areas to consider:

1. The Windows platform. Windows is one of the primary platforms that has grown in use and popularity. Oracle supports all editions of Windows in addition to other popular platforms such as Linux and Unix.

2. Microsoft .NET and the Windows Server System. Oracle technologies and solutions, including Oracle Fusion Middleware, support the standards and provide the best practices necessary to work with the Microsoft .NET platform and Windows Server System. This means that applications built using .NET and Web services run efficiently across enterprise infrastructures, and can be used as the foundation or extension of any enterprise-wide SOA environment using Oracle Fusion Middleware.

3. Microsoft Office. Oracle middleware lets companies leverage the capabilities of Microsoft Office, so users can interact with enterprise applications, SOA environments, and custom programs using the desktop tools they use every day.

Let's now take a closer look at how organizations can take advantage of the synergies between Oracle and Microsoft.

THE ROAD TO BUSINESS IMPROVEMENT: START IN THE MIDDLE

While multiple benefits are possible, organizations that effectively leverage their investments in Oracle and Microsoft should focus on three key areas:

1. Streamline IT operations by simplifying and extending the ability to develop and manage heterogeneous IT systems and deliver on vendor-independent SOA strategies (across Java, .NET, legacy, packaged applications).

2. Address information security and compliance issues by leveraging investments in Active Directory to provide comprehensive provisioning, access control, governance and security capabilities.

3. Increase user productivity by enabling workers to be more productive by using familiar desktop tools to access, analyze and work with enterprise information.

STREAMLINE IT OPERATIONS

One of the challenges that companies face with disparate IT systems is how to manage them efficiently and cost-effectively. It's not uncommon for organizations to manage each system individually—with a different person (or even department) and a distinct skill set, armed with one or more tools and management interfaces, for each. "Managing" in this fashion is inefficient, time-consuming and costly. It also forces additional IT investments as new applications are added, rather than enabling organizations to get the most out of what they already own.

Oracle Enterprise Manager, a solution for monitoring applications and services through a single, integrated console, helps tackle these issues head-on. This solution enables corporations to deliver higher quality of service and reduce related administrative and management complexity by giving them the tools to monitor, automate and test systems and applications—regardless of origin—from a single vantage point. As a result, IT staff can manage proactively, identifying and resolving potential issues *before* they impact business performance. Better tools also enable IT staff to reduce the amount of time that they spend managing systems, which means more time for strategic planning or other business-focused projects.

Cutting complexities from the complete life cycle of an investment, Microsoft plug-ins for Oracle Enterprise Manager help companies oversee configuration changes and enforce standardized policies within Oracle and Microsoft environments simultaneously. Support for the .NET Framework and Windows Server System enables administrators to view, monitor and manage Microsoft products and applications that leverage Active Directory, BizTalk or SQL Server and the .NET Framework from a single vantage point.

Build composite applications using Web services

This type of integrated, "single view" environ-

INTEROPERABILITY SNAPSHOTS

Company: Provider of outsourcing, consulting, IT services to government clients

Solution: Oracle SOA Suite (which includes BPEL Process Manager to orchestrate Web services)

Environment: BEA WebLogic J2EE run-time, .NET-based front-end user interface

Business benefit: Enabled standards-based architecture that will allow company to adapt quickly to changing legislation and serve multiple states with varying regulations.

Company: Major food retailer and distributor

Solution: Oracle Database, Oracle SOA Suite

Environment: .NET-based front-end user interface, IBM MQSeries for messaging with legacy mainframe system

Business benefit: Automated process flow that manages transaction logs from IBM point-of-sale systems in over 200 stores and provides key sales metrics to those that need it to make optimal decisions on merchandizing and managing suppliers.

ment is also useful at the project or strategic initiative level, making it easier to leverage different types of Web services—be they based on Java, .NET, legacy or packaged applications—to enable standards-based software development. This major step on the road to SOA enables developers or even trained business analysts to quickly build composite applications to address business challenges that can be flexibly changed later on if need arises.

The importance of this ability cannot be overstated. Developers continue to embrace two main platforms for building Web services (J2EE and Microsoft .NET). Some companies may choose one platform over the other, hoping to leverage as much existing application programming as possible. But ideally, shouldn't all of this software code be available to those developing composite applications? This is one of the basic tenets of SOA—use (and re-use) what you already own to increase agility and meet new business challenges quickly.

Once services are developed, mutual support for Web services standards such as BPEL (Business Process Execution Language) ensures interoperability between Oracle BPEL Process Manager and Microsoft's BizTalk servers. BPEL allows companies to exchange business process models between platforms and manage BizTalk activities within larger BPEL-defined business processes in Oracle BPEL Process Manager, a part of the Oracle SOA Suite. As a result, composite applications that address evolving business requirements can be developed and brought online faster.

Oracle Fusion Middleware enables truly cross-platform SOA by supporting both J2EE and .NET. To ensure SOA success, the company conducts real-world interoperability testing to confirm the utility in mixed environments. Additionally, Oracle Web Services Manager provides the answer to extending security to SOA environments and making it easier to manage disparate Web services. With the Oracle solution, you gain the capability to secure, manage and enforce operational policies for both Java and .NET Web services, all from a single interface.

The Oracle solution delivers a number of business benefits to customers. Chief among these is the ability to continue to derive value from existing investments. Second, speed drives competitive advantage—and the importance of these factors will only intensify as more companies embrace SOA. Finally, the ability to secure, manage and enforce policies related to Web services consistently, from a single interface, helps companies bolster information security and compliance efforts.

REAL-WORLD EXPERIENCES

A leading Web-based employment company valued the diverse computing environment it built using a mix of customized Oracle Financials, Siebel CRM, and Microsoft SQL Server, .NET, and Active Directory technologies. But when it needed to improve the automation of its end-to-end order management process, it found that fragile, hard-coded point-to-point interfaces were failing regularly.

For help, the company turned to a service-oriented architecture using Oracle Fusion Middleware.

The company now identifies five key business advantages:

- Middleware bridged the gap between the CRM and ERP systems
- Unreliable custom interfaces are eliminated and replaced with standard interfaces
- Middleware-enabled portals provide simplified access to role-based applications and content
- New business intelligence capabilities turn real-time operational data into sales and marketing insights
- Synchronization between the Oracle HR application and Microsoft Active Directory provides a single system of record for all employees, which is vital for regulatory compliance

ADDRESS INFORMATION SECURITY AND COMPLIANCE

Securing corporate information and ensuring corporate and regulatory compliance are among the most difficult issues faced by enterprises today. Access to information is often one of the major points of contention. From a business point of view, companies must give employees access to the information they need—regardless of where they are, or what type of device they're using. Unfortunately, "proper" access is like a moving target—as employees come and go, and change jobs within a company, their access rights will need to change and evolve. Otherwise, confidential information may fall into the wrong hands, exposing a company to unnecessary risk.

Many organizations have standardized on Active Directory as the main user directory or record of employees, or they use Active Directory as one of many different LDAP servers implemented departmentally. Oracle Identity Management—the company's solution for managing the end-to-end life cycle of user identities within diverse IT environments—supports single sign-on (SSO) using Active Directory as one of its core capabilities. This means that existing user information in Active Directory can be fully leveraged and utilized with the Oracle Identity Management solution.

In addition to improving accuracy of security records, this lowers user administration costs by reducing the need for IT to change user information manually for things like role changes

and active/inactive employee status and automating updates to user information to all relevant systems. When employees come on board, they are granted access to the appropriate systems. When they leave, they can be de-provisioned quickly, so that information security and integrity are not compromised—particularly crucial for those employees who leave to join a competing organization.

INCREASE USER PRODUCTIVITY

Every day, over 400 million people use Microsoft Office. It makes sense, therefore, to derive the most value from this tool and users' knowledge of it as possible.

Oracle Fusion Middleware can help companies address the issue of employee productivity by connecting Microsoft Office products such as Word, Excel and PowerPoint with Oracle E-Business Suite, PeopleSoft, JD Edwards and Siebel as well as non-Oracle applications. For example, productivity rises if the accounting staff can perform financial analyses using familiar desktop tools such as Excel instead of specialized "power-user" tools.

Overall, by building applications that use Office as the front end to underlying Oracle technologies and applications, companies can reduce errors, eliminate duplication of efforts, and help their workers become more productive.

Oracle delivers on this opportunity by enabling organizations to connect Microsoft Office with their business applications to work together effortlessly on typical enterprise processes such as expense reporting, time management or employee management. For example, managers work directly in Outlook or Excel to interact with HR processes such as request for salary increase, spot bonus for employees or review team vacations or expenses. Field personnel can use Outlook to book customer meetings, requests and document service calls in Word, kicking off automated Siebel-based processes for delivery on the customer need. For example, a service rep can schedule technical support to fix a known issue, starting up a process to assign, staff and resolve an active case via Outlook and Word.

Business analysts who are familiar with macros and Excel pivot tables for running scenarios and building models can use Oracle Business Intelligence and Excel to analyze online analytical processing (OLAP) data to better understand their customers and markets. Finally, Oracle's XML Publisher streamlines the tedious and IT-intensive process of creating reports and high-fidelity outputs such as checks, work orders, and invoices. While the data from back-end systems remains in the domain of IT, business users can format outputs and even regionalize documents with only minimal ramp-up using Word or Excel to build the templates. Across the board, retraining time is minimized or eliminated altogether because workers stay within familiar environments using everyday productivity tools that they've already mastered.

SNAPSHOT: MANAGING SECURITY, COMPLIANCE, AND COMPLEXITY

Company: European IT services provider

Solution: Oracle Identity Management, Oracle Application Server (including the Portal)

Environment: Four homegrown departmental portal environments and four separate user administrations, separate Internet and intranet platforms, and three separate Microsoft Active Directory implementations. To accommodate this infrastructure, company has been maintaining five data centers that store over 250 terabytes of information and running 1,300+ Windows servers.

Business benefit: Unified disparate portal environments into a single Oracle Portal implementation utilizing existing investment in Active Directory, .NET Web services and .NET servers. For IT, they were able to reuse existing investment in Microsoft technologies. For intranet users, they now have single sign-on through Windows log-in, so no more multiple user names and passwords to remember to access enterprise resources. Now the company has simplified and cost-effective central user administration for customers and employees that's easy to maintain moving forward. IT now spends a lot less time making manual changes to identity management infrastructure and is able to work on strategic projects for the business.

FULL SPEED AHEAD

Heterogeneous IT systems can no longer stand in the way of getting the information needed to serve customers better and drive business growth. Companies must ensure that their customer service reps have the latest order histories at hand when a customer calls, and that they maintain accurate and up-to-date records to keep inventories replenished in concert with sales trends. Barriers to meeting business challenges are falling every day with the introduction of new standards, renewed interoperability testing between vendors, and sweeping initiatives like SOA.

As many companies have discovered, numerous benefits are possible with a combined portfolio of Microsoft and Oracle technologies and applications. This was true for a leading job search site that beefed up its compliance efforts by exploiting synergies between Oracle applications and Microsoft Active Directory—making connections and managing risk by leveraging what they already own. Indeed, technology diversity is a matter of course these days—and it's imperative to make it work for your company for the long haul. ■