



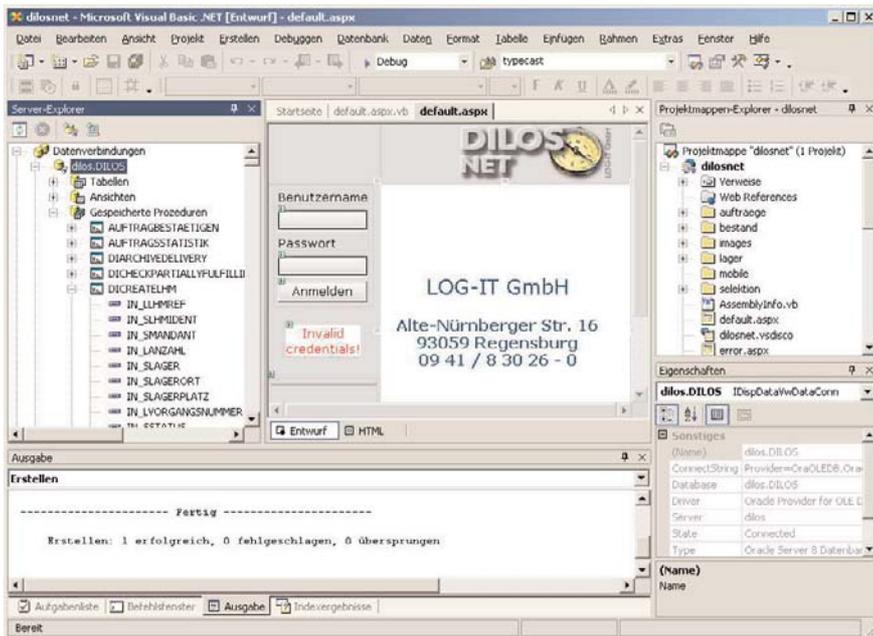
Oracle9i on Intel Architecture and .NET provide Freedom of Choice

Who	Oracle Corporation (Nasdaq: ORCL) with an annual revenue of \$ 9.5 billion is the world's leader in enterprise software applications. Oracle's goal is to make sure that you spend less money on your systems while getting the most up-to-date and accurate information from them.
What	The Oracle Intel Technology Center (OITC) in Feldkirchen, Germany, has tested which advantages Oracle9i* offers as base of a .NET environment. As a practical example, OITC evaluated the porting of DILOSweb.NET, an online solution developed by LOG-IT GmbH from Regensburg, Germany, which amongst other things tracks warehouse processes.
Why	Disagreement over the advantages of Java* 2 Enterprise Edition (J2EE*) over .NET or Windows* compared to Linux causes confusion and uncertainty in the IT industry. Through integration and interoperability, consequent support of industry standards, commitment to open systems, OS independence and the portability of the Oracle technology, the migration to Oracle technology on the Intel® system platform creates a strategic competitive edge for independent software vendors (ISVs).
Why Intel	With Oracle and Intel, customers do not need to decide between J2EE and .NET, but can rely on full support in both areas. With the Intel system platform, businesses have the freedom of choosing any operating system and using different options for scaling, e.g. scaling up to 64-bit technology or scaling out to more nodes. With the Intel platform and Oracle software, companies can move their applications between J2EE and .NET with minimal expense and migration time.

Value Proposition

In the face of the competition between technologies like J2EE and .NET for the permanent favor of businesses, IT managers only hesitantly opt for a strategy. In many cases, strategic decision findings are further complicated and delayed by these discussions. Enterprises and IT managers must consider several questions:

- **investment protection:** the question arises, how to achieve investment protection for businesses and which strategy may help ISVs (Independent Software Vendors) ensure competitive advantages
- **cost of porting:** enterprises have to consider the cost of porting a .NET application developed on Microsoft SQL Server to Oracle9i. Additionally, the question arises on the hardware side of the cost for porting the Oracle database from Intel 32-bit to Intel 64-bit on Windows or Linux, respectively
- **flexibility:** for flexibility's sake it needs to be clarified whether deploying an Oracle database as a base for a back-end .NET application is also possible on Linux or UNIX, alternatively to Windows
- **performance:** the decision makers have to take into account the speed of the ported solution. Compared to the previously used database solutions it should provide significant performance benefits.



ABOUT ORACLE

The evolution of Oracle on Windows began in 1993; according to Compuware (2002) today 3.2–6.4 million Visual Studio developers use an Oracle database on their back-end machines. Oracle9i Release 2 is completely .NET-enabled and ensures secure, high-performance, scalable and reliable deployment of enterprise applications in the new Microsoft application and development environment. .NET supports all data access paths such as ODBC.NET, OLE DB.NET or ADO.NET (by the native Oracle Data Provider for .NET).

Intel and Oracle work together in many ways to ensure optimal solutions for business users. The Oracle Intel Technology Center allows Oracle and Intel to deliver different kinds of feasibility evidence, using concrete examples of Internet applications based on the Microsoft .NET technology. This practical implementation makes it possible to clearly show the added value resulting from deployment of Oracle technology on Intel system architecture for the new Microsoft application and development environment.

Solution Overview:

PORTING OF DILOSWEB.NET

DILOSweb.NET is an online solution developed by LOG-IT GmbH in Regensburg for – amongst other things – tracking inventory processes and the return management. Like other Internet-based applications it demands high stability, scalability, availability, and security. The latest DILOSweb.NET version is implemented as ASP.NET solution and can also be used by ERP systems as Web Service via SOAP (Simple

Object Access Protocol). LOG-IT decided to migrate to ADO.NET, the data-access component of the Microsoft .NET Framework which works with any component on any platform that understands XML. According to a Gartner Group research the migration of existing applications could amount to 40–60% of the original development costs. With ADO.NET, the application benefits from significant performance advantages over the deployment of ODBC.NET or OLE DB.NET. According to a Microsoft research study, the performance advantage is up to 200%. In the spring of 2003, Intel and Oracle managed to establish the benefits from the

porting in the Oracle Intel Technology Center in Feldkirchen near Munich, Germany.

A CLOSER LOOK

One of the key components of the Oracle Intel Technology Center project was the evidence of the portability of Oracle with .NET to different operating systems and architectures on the back-end machines. A four-way Intel® Xeon™ processor-based system with Windows 2000 Server and .NET Framework was deployed as application server for the ASP.NET application.

“There are tremendous differences between ADO and ADO.NET, and this means a real application migration, not just porting. But in the end, we saw the gained benefits justifying all expenditures. This also benefits our customers.”

Stefan Rodich,
Development Director
at LOG-IT GmbH

The experiences in the Oracle Intel Technology Center demonstrated that .NET application environments like DILOSweb.NET can directly benefit from the advantages and the unique market position of Oracle technology on the Intel system platform. This proven Oracle portability for .NET applications results in a variety of benefits for businesses and ISVs. In addition to the free choice of the operating system for the Intel system platform, there are numerous options for scaling the system, e.g. scaling up to the Intel® Itanium® 2 processor with its 64-bit architecture or scaling out by supplementing existing Intel Xeon processors with additional servers. And moving to another platform like moving from Xeon to Itanium 2 does not imply an expensive and time consuming migration, but rather easy and fast porting, it requires no changing of the application itself.

This platform independence is ensured by a common code base of the Oracle9i products on all system platforms. This common code base protects companies' investments when migrating to another hardware platform. It also ensures a flexible choice of operating systems and optimal interoperability between applications on different platforms.

Many businesses are seeking to consolidate their server infrastructure to simplify server management and reduce operating costs. These efforts also encompass the need to integrate different worlds on the application and database server level in the back-end. Here, Oracle database clusters can be used to allow flexible growth with the expected performance requirements without having to modify the applications. This requirement is currently met only by Oracle9i Real Application Clusters (RAC). This kind of "pay-as-you-grow" scalability can be reached today based on an affordable Intel architecture that simultaneously provides the required high availability and security without redundancies. In this context, future deployment of blade servers and the strong trend towards grid computing will gain higher importance.

Oracle® & Intel® Technology Centre

High end solutions for the Enterprise

THE INTEL ADVANTAGE

The Oracle database was ported alternately to different operating systems and 32-bit or 64-bit Intel architectures with Intel Xeon processors and Intel Itanium 2 processors. Tests in the Oracle Intel Technology Center showed that porting the Oracle database to the various platforms stays completely transparent for a .NET application and requires no changes at the client or applications server.

The back-end can be scaled up to a 64-bit Intel architecture with 64-bit Windows Server 2003 or 64-bit Linux when higher capacity of maximum addressable main memory is required. The new Intel 64-bit architecture is already supported by the Oracle9i Standard Edition and offers an affordable solution for utilizing the extended 64-bit options.

To allow for flexible and cost effective system growth, the Intel scale-out architecture for cluster systems can be deployed with Oracle9i Real Application Clusters and thereby achieve a "pay-as-you-grow" scalability. Simultaneously, this strategy also increases the high availability of the back-end without having to invest in a redundant fail-over strategy.

"With the ASP and ADO range of features that have previously been available, our requirements for an advanced Web interface and architecture were not completely fulfilled. Also, customizing often involved added investments. By utilizing the .NET technology we have achieved more flexibility and faster response times in regard to various customer demands, and with the enhanced features of .NET we have developed cutting-edge Internet-based applications like DILOSweb.NET."

Stefan Rodich,
Development Director
at LOG-IT GmbH

More Information about
Microsoft Corporation
Windows .NET Server 2003-Homepage on
www.microsoft.com

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