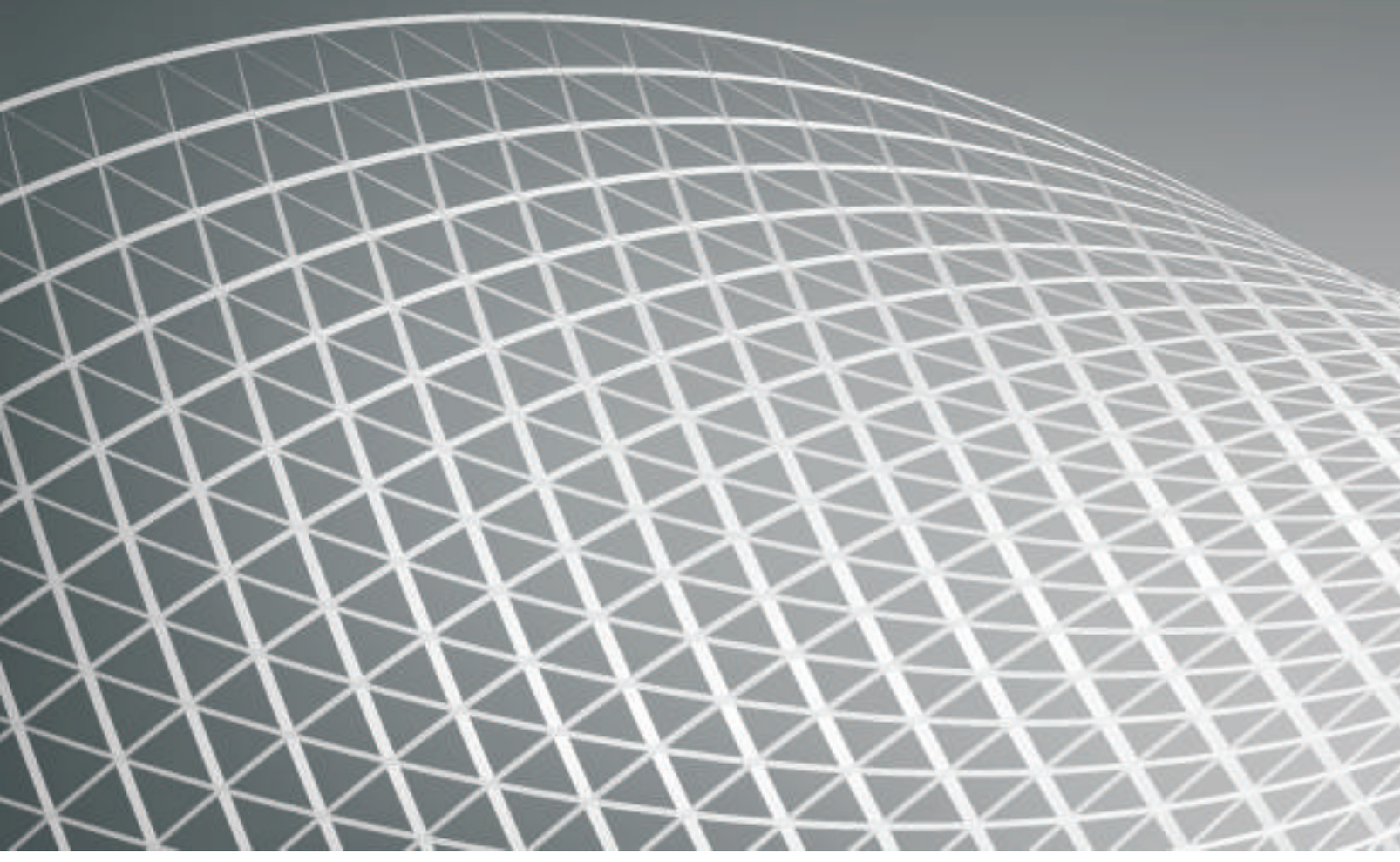
Microsoft®

Microsoft Application Platform

Get ahead of the competition

Microsoft® SQL Server® 2008 R2

Microsoft® BizTalk® Server 2010



In today's competitive economic environment, it has become increasingly difficult to achieve business efficiency with flat IT budgets along with the growing pressures to cut operational costs. This makes it imperative to recognise and leverage the power of IT as a key strategic asset for achieving your long-term business goals.

To do this, what is needed is an IT engine that can harness the experience and knowledge of the entire organization. A system that gets you maximum output with minimum input, improves business processes, delivers results faster and is easy-to-integrate. A solution which helps you:

- Maximize value of IT Investments
- Modernize & orchestrate legacy applications
- Increase productivity
- Reduce TCO

The Solution - Microsoft BizTalk Server 2010

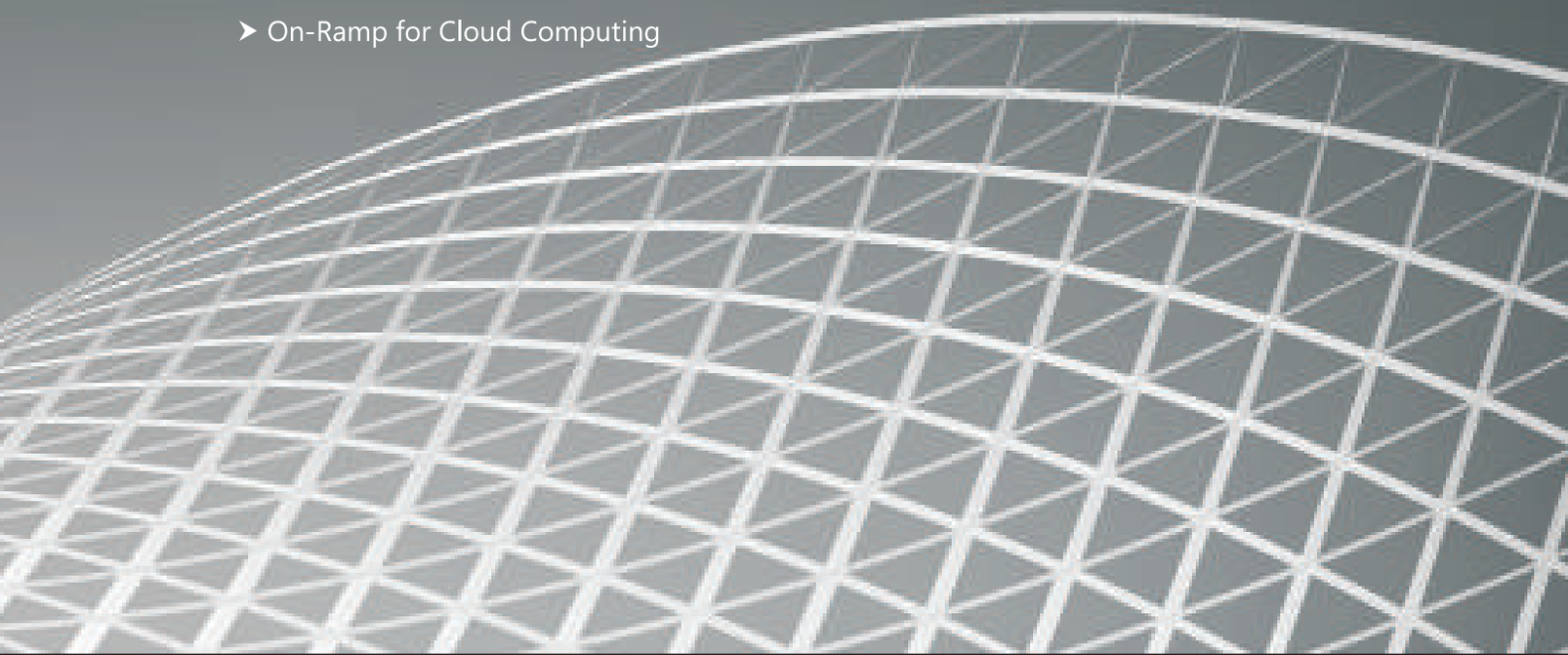
Microsoft BizTalk Server 2010 helps you maximize the value of your existing applications; deploy new ones so that you achieve greater productivity with lower costs of ownership and continuous growth along with business success.

Microsoft BizTalk Server vs. Oracle Fusion

Organizations across the world spend millions in deploying IT solutions for better productivity, but one of the biggest pain points lies in bringing the work force up to speed on the business applications.

Research has proven Oracle to be more expensive, complex, confusing and hard to integrate with other existing applications. Therefore, the learning curve for Oracle is higher as compared to Microsoft BizTalk Server.

- Microsoft BizTalk's key benefits over Oracle
- Affordable scalability and lower TCO
- Easy-to-assemble with faster time to value
- Out-of-the-box interoperability
- Performance on par with Oracle Fusion with lower hardware costs
- Licensing almost 83% less than Oracle Fusion (maintenance included)
- Enhanced manageability with familiar Microsoft user experience
- Ability to leverage the latest Microsoft platforms
- Implementation in days rather than months
- Easier integration, configuration, and management
- BizTalk Server out-of-the-box features enable SOA without requiring countless additional modules or busloads of consultants
- Quick integration with existing applications
- Easily supports heterogeneous host systems integration
- Features designed for improved logistical and operational efficiency (e.g. RFID)
- Business Activity Monitoring (BAM)
- On-Ramp for Cloud Computing



Microsoft BizTalk Server vs. Oracle Fusion

Oracle	Microsoft
Oracle has huge footprint (300+ GB); can't install just part of stack	Performance at par with Oracle Fusion with lower hardware costs
Too big and expensive for many jobs	Licensing almost 83% less than Oracle Fusion
Additional 22% of licensing required for maintenance and support	Maintenance included in license
Requires custom adapters at extra cost to integrate Oracle applications and databases	More functionality and connectivity options out-of-the-box at no additional cost
May be forced to move to Web Centre Suite at a much higher price if you desire any customization	Leverages latest Microsoft platform
Complex and proprietary approach takes more time	Implement in days rather than months
Lacks tools for non-programmers, unusable by novices	Easier integration, configuration, and management
Needs countless additional modules	BizTalk Server out-of-the-box features enable SOA
Lacks coherent set of development tools	Includes full reference implementation of a working ESB 2.0 with all components integrated
Focused on integrating Oracle applications	Quick integration: 30 adapters and 4 industry accelerators
Requires custom adapters at extra cost to integrate Oracle applications and databases	Supports heterogeneous host systems integration
Integration with heterogeneous systems is a trial-and-error task	Strong Business Activity Monitoring (BAM)

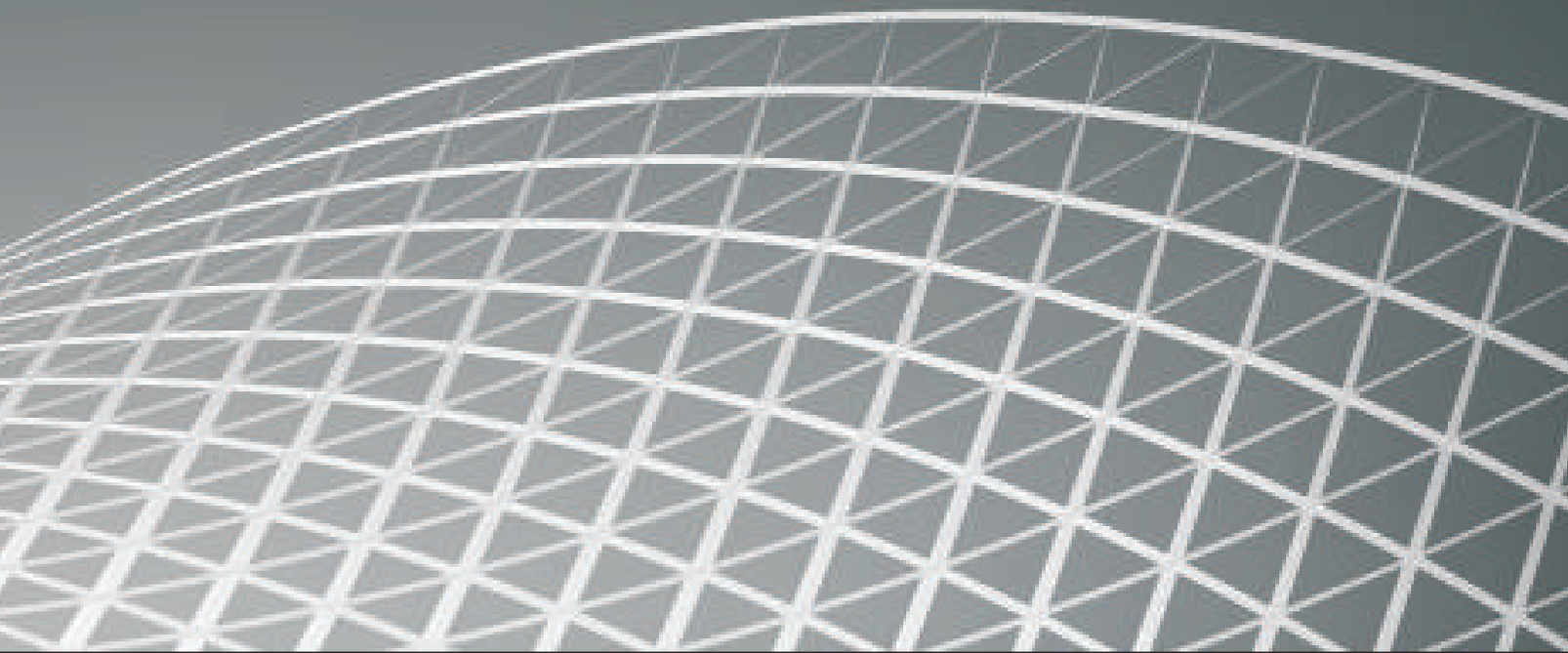
SQL Server 2008: Benchmarks

Take advantage of SQL Server 2008's industry-leading performance and scalability for real-world database workloads with the lowest cost of operation, as verified by Microsoft partners and industry-standard Transaction Processing Performance Council's TPC benchmarks. We at SQL Server always strive to innovate with the latest hardware and software advances to provide our customers with industry-leading scale and performance at a cost that provides customers with best value. Besides Transaction Performance Council (TPC) benchmarks for OLTP and DSS, SQL Server provides benchmarks for ETL and many partner applications such as SAP, Siemens Teamcenter, CamStar, and Microsoft Dynamics.

About TPC Benchmarks

The TPC-E benchmark, introduced in February 2007 to measure OLTP performance, is broadly representative of customer workloads. Unlike its predecessor TPC-C, TPC-E uses a complex but realistic database schema and requires mainstream capabilities such as referential integrity and RAID protected storage. TPC-E benchmarks also measure the price/performance of a system by dividing the total system cost by the performance, measured in transactions per second (tpsE).

The TPC-H benchmark is a decision support benchmark. It consists of a suite of business-oriented ad-hoc queries and concurrent data modifications. The queries and the data populating the database have been chosen to have broad industry-wide relevance. This benchmark illustrates decision support systems that examine large volumes of data, execute queries with a high degree of complexity, and give answers to critical business questions. TPC-H benchmarks also measure the price/performance of a system by dividing the total system cost by the performance, measured in queries per hour (QphH).



OLTP Performance: TPC-E**

Company	Machine	Result
UNISYS	ES7000 Model 7600R	New world record: 2,013 tpsE on a hex core Xeon 16-proc (96-core) server
NEC	Express5800/A1160	1,568 tpsE on a Xeon 16-proc (64-core) server
IBM	System x3850 M2	817 tpsE on a Xeon 2-proc (8-core) server

OLTP Price/Performance: TPC-E**

Company	Machine	Result
DELL	PowerEdge T610	World record: 307 USD Price/tpsE on a Xeon 2-proc (8-core) server
IBM	System x3850 M2	319 USD Price/tpsE on a Xeon 2-proc (8-core) server
IBM	System x3850 M2	457 USD Price/tpsE on a Xeon 4-proc (24-core) server

DW Performance*: TPC-H

Company	Machine	Result
HP (100 GB)	ProLiant DL580 G6	51,422 QphH on a Xeon 2-proc (8-core) server
HP (300 GB)	Proliant DL785 G6	91,558 QphH on a Opteron 8-proc (48-core) server
HP HP (1000 GB)	HP Proliant DL785 G6	81,514 QphH on a Opteron 8-proc (48-core) server
UNISYS (3000 GB)	ES7000 Model 7600R	102,778 QphH on a xeon 16-proc (96-core) server
UNISYS (10,000 GB)	ES7000 Model 7600R	80,173 QphH on a Xeon 16-proc (64-core) server

DW Price/Performance*: TPC-H

Company	Machine	Result
HP (100 GB)	ProLiant DL380 G6	1.07 USD/QphH on a Xeon 2-proc (8-core) server
HP (300 GB)	Proliant DL785 G6	1.94 USD/QphH on a Opteron 8-proc (48-core) server
HP HP (1000 GB)	Proliant DL785 G6	2.90 USD/QphH on a Opteron 8-proc (48-core) server
UNISYS (3000 GB)	ES7000 Model 7600R	21.05 USD/QphH on a Xeon 16-proc (96-core) server
UNISYS (10,000 GB)	ES7000 Model 7600R	New world record: 18.95/QphH on a Xeon 16-proc (64-core) server

As of 11-Nov-2009 2:10 AM [GMT]
Source: Transaction Processing Performance Council (http://www.tpc.org/)
Source: SAP (www.sap.com/benchmarks)
*Many of the results mentioned above are amongst the top 3 in their respective categories and the best result amongst the major database vendors. All the above results are in the top 10.
** TPC-E is more representative of real world workloads and its complexities. Microsoft has stopped publishing TPC-C results on SQL Server 2008. The older SQL Server 2005 on Windows Server 2003 is used to publish results on TPC-C. Some of these TPC-C results are still amongst the top 10 results.

ETL Performance

Application	Company	Result
ETL Performance	UNISYS	World record for ETL load performance Load 1TB of data in less than 30 minutes using ETL tools 32-proc (64-core) server [ES7000]

DW Price/Performance*: TPC-H

Application Type	Company/ Application	Result
Manufacturing Execution Systems	Camstar	Record scale at 205 MES and 60% space reduction due to database compression. Record scale at 205 Manufacturing Execution System transactions per second and 60 percent space reduction due to database compression were achieved with Camstar's MES application, SQL Server 2008, and Windows Server 2008.

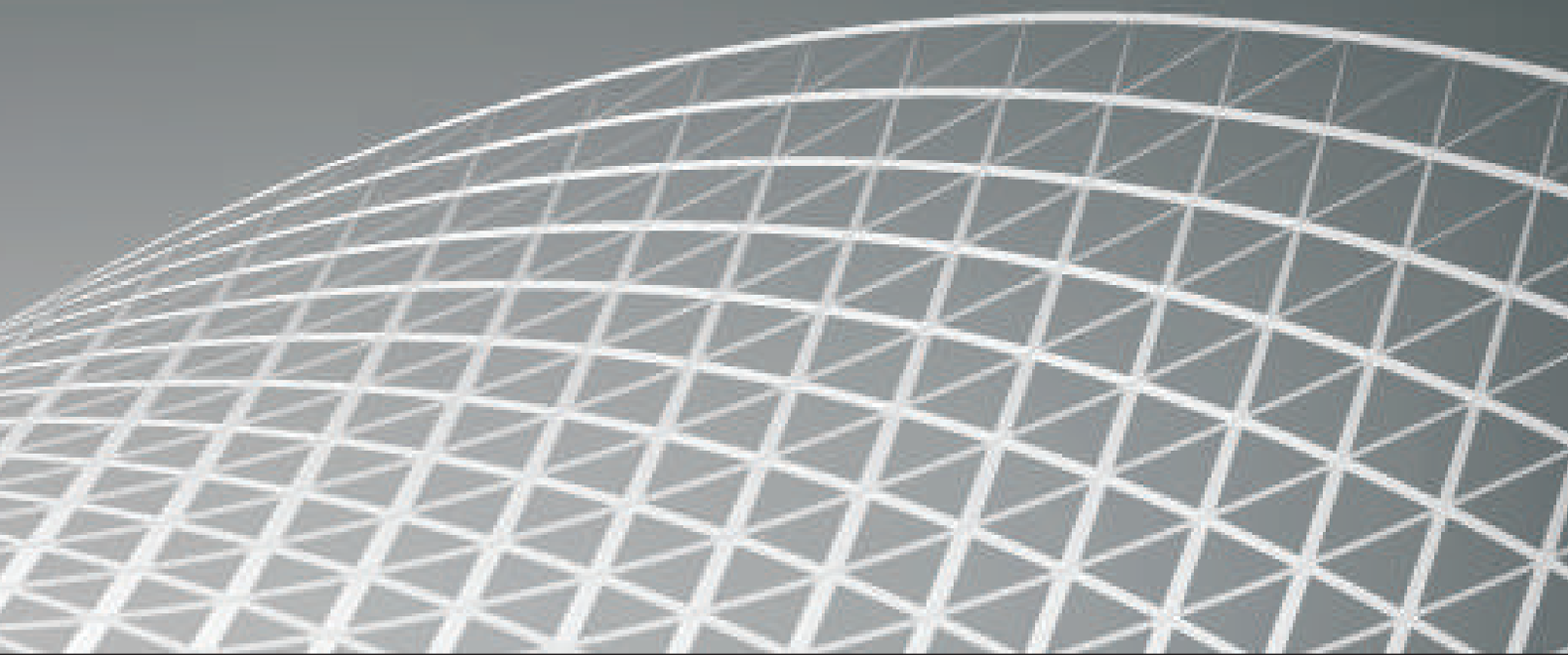
DW Price/Performance*: TPC-H

Application Type	Company/ Application	Result
Enterprise Resource Planning	Microsoft Dynamics AX	**Record scale improvement of 70% in throughput, scalability, and response time** Benchmark tests demonstrate record scale showing up to 70 percent improvement in throughput scalability and response time; maximizing performance while minimizing database growth using SQL Server 2008 database compression.
Customer Relationship Management		**Record scale at 50,000 concurrent users with sub-second response rate** Benchmark tests demonstrate that record scale at 24,000 concurrent users with sub-second response rate was achieved with Microsoft Dynamics CRM 4.0, SQL Server 2008, and Windows Server 2008 for enterprise-level workload.
Enterprise Resource Planning	SAP	**World record scale set as of February 26, 2008 by SQL Server 2008 on SAP Sales and Distribution (SD) Standard Application 3-tier benchmark on 4-Processors Server using Industry Standard Blade servers with 34,000 SAP SD Standard Application Benchmark Users (6)** This latest benchmark demonstrates an increase of throughput of nearly a factor of 3 over the last 4 years with Industry Standard hardware (4) (5). The demonstrated throughput by SQL Server 2008 x64 and Windows Server 2008 x64 running on Industry-Standard hardware is expected to cover scalability needs of at least 97% of all SAP deployments worldwide. SQL Server remains a low TCO platform for SAP. A Microsoft study based on a survey of 68 SAP ERP customers shows that Microsoft SQL Server migration can be beneficial to lowering costs for SAP customers. The study shows that "migrating an SAP ERP environment to SQL Server reduced unplanned downtime by over 20%", "cut IT labor costs by nearly 25%," and "cut ongoing software support costs up to 85%".

DW Price/Performance*: TPC-H

Application Type	Company/ Application	Result
Product Lifecycle Management	Siemens Teamcenter	**Largest benchmark with Siemens for Product Lifecycle Management Applications** Scalability benchmark with 5,000 concurrent users and 50 percent space reduction due to database compression achieved with Siemens Teamcenter 2007, SQL Server 2008 and Windows Server 2008.

(4) Certification Number 2003039: SAP SD standard R/3 Enterprise 4.70 application benchmark in 3-Tier configuration certified on July 14, 2003, with Number of benchmark users & comp.: 11,200 SD (Sales & Distribution) with an average dialog response time: 1.90 seconds running Windows 2003 Enterprise Edition SQL Server 2000 on RDBMS database server. Configuration: RDBMS server: HP ProLiant Model DL760 G2, 8-way SMP, Intel Xeon MP, 2.8 GHz, 2 MB L3 cache, 8 GB main memory. For more details, see **http://www.sap.com/benchmark.**
(5) Certification Number 2005030: SAP SD standard R/3 Enterprise 4.70 application benchmark in 3-Tier configuration certified on June 27, 2005, with Number of benchmark users & comp.: 18,000 SD (Sales & Distribution) with average dialog response time: 1.87 seconds running Windows Server 2003 Enterprise Edition (64-bit) and SQL Server 2005 (64-bit) on RDBMS server. Configuration: Database server: HP ProLiant DL585, 4-way SMP, Dual-core AMD Opteron processor Model 875 (2.2 GHz), 128 KB L1 cache, 2 MB L2 cache, 32 GB main memory. For more details, see **http://www.sap.com/benchmark.**
(6) Certification Number 2008003: SAP SD standard SAP ERP 6.0 (2005) application benchmark in 3-Tier configuration certified on 02/26/08 with Number of benchmark users & comp.: 34,000 SD (Sales & Distribution) with an average dialog response time: 1.99 seconds running Windows Server 2008 Enterprise Edition (64-Bit) and SQL Server 2008 (64-bit) on RDBMS database server. Hardware configuration of RDBMS server: HP ProLiant BL680c G5, 4 processor/16 core/16 thread Quad-Core Intel Xeon E7340 / 2.40GHz, 64GB RAM. For more details, see **http://www.sap.com/benchmark.**



CERTIFICATION

SAP Standard Application Benchmarks

The SAP SD standard SAP ERP 6.0 (2005) application benchmark performed on February 15, 2008 by HP in Houston, TX, USA was certified on February 26, 2008 with the following data:

Number of benchmark users and comp:	34,000 SD (Sales and Distribution)
Average dialogue response time:	1.99 seconds

Throughput:

Fully processed order line items/hour	3,404,000
Dialogue steps/hour:	10,212,000
SAPS:	170,200
Average DB request time (dia/upd):	0.051 sec/0.080 sec
CPU utilization of database server:	93%
CPU utilization of application servers:	66% (dia: 70% upd: 70% enq: 9%)
Operating System all servers:	Windows Server 2008 Enterprise Edition
RDBMS database servers:	SQL Server 2008
SAP ECC Release:	6.0

Configuration:

Database server:	HP ProLiant BL680c, G5, 4processors/16 cores/16threads, Quad-Core Intel Xeon Processor E7340 2.4 GHz, 64 KB L1 cache per core and 4 MB L2 cache per 2 cores, 64 GB main memory
15 Application servers: 14 Dialogue/Update servers:	HP ProLiant BL680c, G5, 4processors/16 cores/16threads, Quad-Core Intel Xeon Processor E7340 2.4 GHz, 64 KB L1 cache per core and 4 MB L2 cache per 2 cores, 64 GB main memory
1 Message/Enq. Server:	HP ProLiant BL680c, G5, 4processors/16 cores/16threads, Quad-Core Intel Xeon Processor E7340 2.4 GHz, 64 KB L1 cache per core and 4 MB L2 cache per 2 cores, 64 GB main memory

Certification Number: 2008003

"Our Customers"

Proven Customer Results

Microsoft BizTalk 2010 Server has more than **8500 customers** worldwide, with an estimated 90% of Fortune 100 companies using it for their day-to-day operations.

"We would need as many as 20 additional employees to complete the same amount of work that this one automated system is performing."

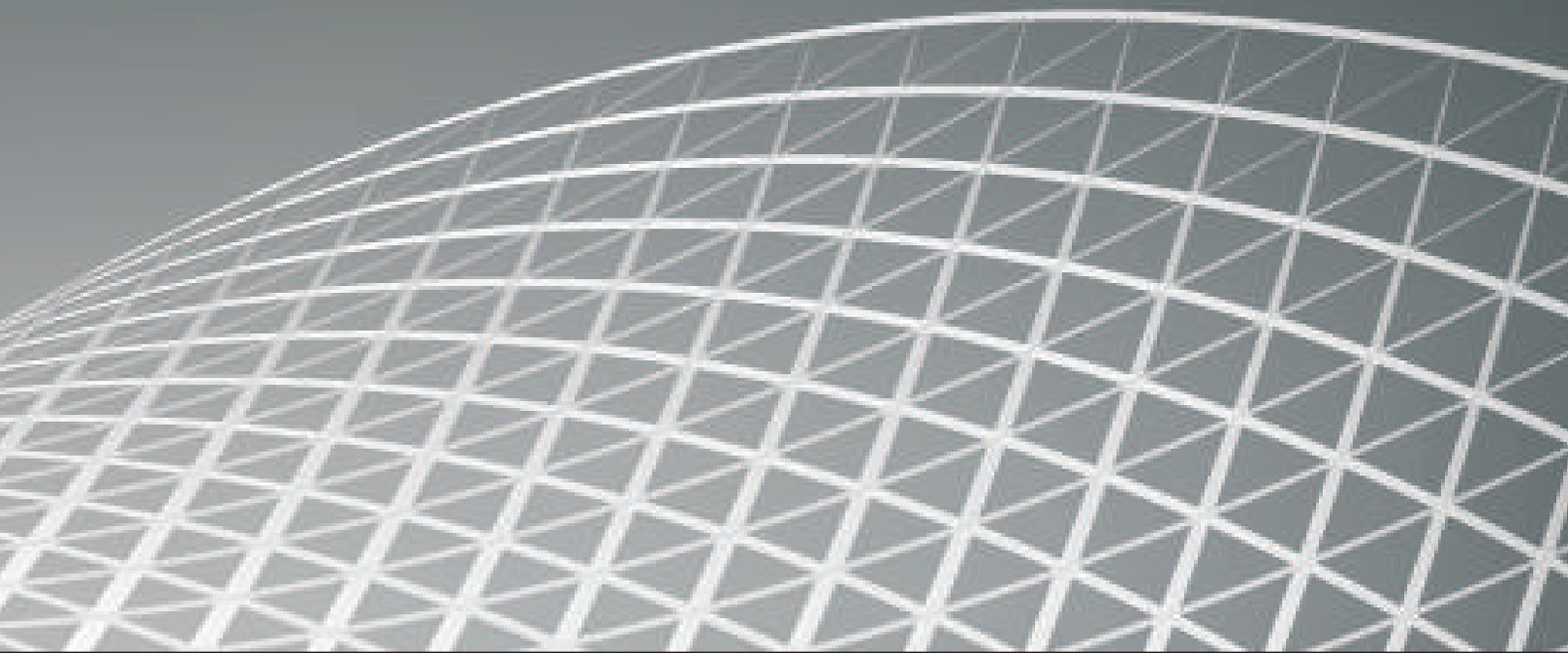
~ Chris Etzel, Manufacturing Engineer, Aidec

"BizTalk Server 2006 could also protect our previous IT investments because it easily integrates with other technologies, including Microsoft SQL Server 2005 data management software and Windows Server 2003 operating system."

~ Faizal Eledath, CIO, Dubai Bank

"Our IT department is under pressure to get more projects done, faster and with fewer resources. We don't have the luxury of allowing projects to take weeks or months anymore; we must finish them in days or even hours. BizTalk Server 2006 R2 supports an IT model that makes this speed and agility possible."

~ Mike Sorrells, Infrastructure Analyst III, Scana



Microsoft®

Microsoft Corporation (India) Pvt. Ltd.
9th Floor, Tower A, DLF Cyber Greens, DLF Cyber Citi,
Sector 25A, Phase III, Gurgaon - 122 002