sgi ®
INNOVATION
FOR RESULTS™

SGI AND ORACLE E-BUSINESS BENCHMARK TESTS

Nearly 70 Percent Faster and Half the Cost:
SGI® Outshines Competitors in Oracle E-Business Benchmark Tests

Not only does SGI Altix deliver superior performance and scalability, its US list price is less than half that of its nearest competitor.
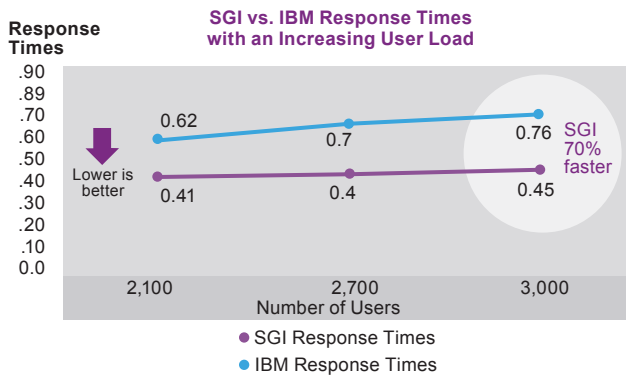

E-Business organizations consistently rank total cost of ownership (TCO), performance, scalability and on-demand flexibility among their top concerns. At the same time, these companies need to respond to an increasing volume of transactions with limited resources. While a number of companies claim to address these concerns, independently audited and confirmed test results on the Oracle® E-Business Suite Oracle 11*i* Benchmark[1] show SGI® Altix® surpasses results from proprietary UNIX® vendors. These tests show Altix leading in performance, scalability and on-demand flexibility, each of which significantly contributes to improving TCO.
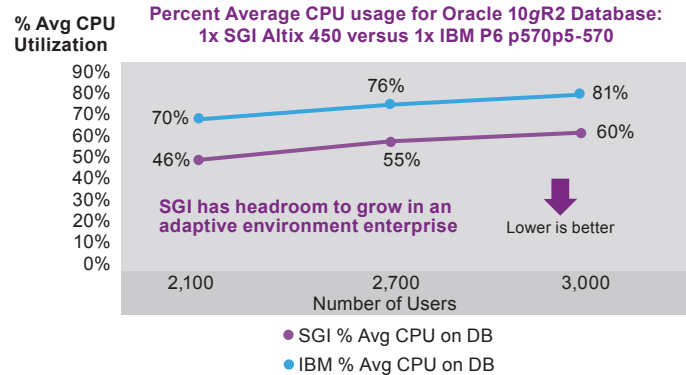
The list price (U.S.) of the tested configuration is less than half that of the tested configuration from IBM®, the closest competing platform on the benchmark tests. This combination of price and performance is good news for businesses seeking to optimize their data center investments.

In the Oracle E-Business suite test that measures response time of applications serving 3,000 concurrent online users, the SGI Altix system outperformed the previous record holder, the IBM p6-570, by 70 percent (Fig. 1). Using a mixed workload model to simulate the various transactions operating within an enterprise, the Oracle E-Business Suite 11*i* benchmark provides metrics for comparing Oracle application performance on different system configurations. Its online component exercises the flows most frequently used by Oracle customers. Its batch component performs database load validation and measures performance while processing volumes of batch jobs concurrently with online activities.

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Response Times

SGI vs. IBM Response Times with an Increasing User Load

.90
.89
.70
.60
.50
.40
.30
.20
.10
0.0

Lower is better

0.62
0.7
0.76

SGI 70% faster

0.41
0.4
0.45

2,100   2,700   3,000
Number of Users

● SGI Response Times
● IBM Response Times

Fig 1: SGI Altix 450 server maintains a high Payroll Batch throughput with a growing user load

% Avg CPU Utilization

Percent Average CPU usage for Oracle 10gR2 Database: 1x SGI Altix 450 versus 1x IBM P6 p570p5-570

90%
80%
70%
60%
50%
40%
30%
20%
10%
0%

70%
76%
81%

46%
55%
60%

SGI has headroom to grow in an adaptive environment enterprise

Lower is better

2,100   2,700   3,000
Number of Users

● SGI % Avg CPU on DB
● IBM % Avg CPU on DB

Fig 2: SGI Altix 450 server scales with CPU utilization and a growing user load

The tested SGI configuration included:
• Database server tier: SGI® Altix® 450 system driven by 16 Intel® Itanium® 2 9000 dual-core single threaded processors and featuring 128 GB of memory
• Application server tier: Six SGI® Altix® XE240 servers, each powered by two Intel® Xeon® dual-core processors and 16 GB of memory and running on Oracle Enterprise Linux
• Storage tier: SGI® InfiniteStorage 4500 system with a dual RAID controller and eight trays, each outfitted with 16 146GB 15K RPM drives.

SGI Beats IBM in Performance
In additional to surpassing IBM in response time, the SGI configuration delivered record hourly throughput in the Oracle measurement of order management and payroll batch business processes and outperformed the payroll batch processing of the IBM p6-570 configuration by up to 70 percent. (Fig 1)

SGI Beats IBM in Price
The tested configuration from SGI that was nearly 70% faster than the tested configuration from IBM in the benchmark tests costs less than half as much as the IBM offering. The tested multi-tiered configuration from SGI is list priced at $653,514, while the tested IBM configuration is list priced at $1.7 million.[2]

SGI Leads Industry in Scalability and On-Demand Flexibility
The Oracle E-Business Suite 11*i* benchmark test results support SGI leadership in delivering scalability to meet future demand as well. The SGI Altix scales nearly linearly with respect to CPU utilization as the number of users and the volume of workflows increase. This demonstrates a well-sized system with a provision for growth in the number of users and the volume of business workflows processed in a production environment. (Fig 2)

The SGI Altix maintained a consistently faster response time, despite the addition of hundreds of online users. The benchmark results show that even with the addition of more than 1,500 concurrent users, SGI Altix consistently achieves low response times. For example, when the benchmark load more than doubles, from 1,400 to 3,000 concurrent users, the average response time of the tested configuration from SGI slows by just 2.5 percent. No other system tested came near the Altix system's fast response times.

Conclusion
The Oracle E-Business Suite Application Performance test results show that SGI provides the highest-performing choice of the tested configurations for adaptive enterprises running an Oracle 10*g* database. The SGI Altix, with significantly lower costs, contributes to lower TCO and demonstrates superior performance and scales on demand to accommodate workloads in the challenging E-Business environments.

To learn more about how SGI can help companies to optimize their Oracle databases, go to www.sgi.com/enterprise.

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