

# Sun StorEdge™ 3510 FC Array and the Sun Fire™ E25K Server

Sun Fire E25K Server and Sun StorEdge 3510 FC Arrays set a new TPC-H world record with Oracle® Database 10g



## Key Highlights

### *World Record TPC-H @3TB Benchmark:*

The Sun Fire E25K teamed with Sun StorEdge 3510 Fibre Channel Arrays achieved a TPC-H performance of 59,435.7 QphH@3000GB outperforming the nearest competitor by over 30% at the time of submission<sup>1</sup>.

### *A Unified Storage Architecture for Diverse Data Access Workloads:*

The Sun StorEdge 3510 FC Array now has the capability to support both FC and SATA drive JBOD expansion trays within one unified storage configuration. This provides simple and cost effective deployment of both random (OLTP, DSS) and sequential (Backup-to-Disk, Media Streaming) data workloads within a unified architecture.

### *Performance without sacrificing data integrity:*

The Sun StorEdge 3510 FC Array offers a full media scanning capability that will continuously monitor and reallocate any bad data blocks, preventing data loss before it happens.

### *Extreme Disk Utilization - Reducing Your Total Cost of Ownership:*

The StorEdge 3510 FC Array is extremely efficient in utilizing disk drive performance owing to its advanced cache management and disk de-staging algorithms.

## WORLD RECORD BENCHMARK: Sun StorEdge 3510 Fibre Channel Array and Sun Fire E25K beat HP Superdome by over 30% in TPC-H benchmark

### David and Goliath team to beat the World at Data Warehousing

The powerful combination of Sun Fire™ E25K and Sun StorEdge™ 3510 FC Arrays has achieved a new Transaction Processing Performance Council Benchmark™ H (TPC-H) data warehousing world record benchmark result at the 3TB scale, outperforming the nearest competitor system by over 30% on the TPC-H composite metric, QphH@3000GB. This is a measure of high load throughput as well as single query performance. The benchmark was run on a 72-way 1.2 GHz UltraSPARC® IV processor-based Sun Fire E25K with Sun StorEdge 3510 FC Arrays, running the Solaris™ 10 Operating System (OS) and Oracle® Database 10g with Automatic Storage Management.



### World Leading Results With Real World Relevance

This result demonstrates the performance leadership of the Sun UltraSPARC, Sun Solaris, and Sun StorEdge arrays on large SMP platforms and Oracle Database 10g with the most demanding enterprise application environments. The TPC-H result not only demonstrates that the Sun Fire E25K can handle the increasingly large databases required of Decision Support Systems (DSS), but when paired with the super-dense, super powerful Sun StorEdge 3510 FC Array, it can deliver 14GB/sec of real I/O throughput with Oracle 10g. This benchmark utilized Oracle Automatic Storage Management (ASM) for volume management in conjunction with Solaris Volume Manager. Using these two features greatly simplified the task of configuring the database with no sacrifice in performance.

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### Interpreting The TPC Benchmark H (TPC-H) Results

The TPC Benchmark™ H (TPC-H) 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. The performance metric reported by TPC-H is called the TPC-H Composite Query-per-Hour Performance Metric (QpH@Size), and reflects multiple aspects of the capability of the system to process queries. These aspects include the selected database size against which the queries are executed, the query processing power when queries are submitted by a single stream, and the query throughput when queries are submitted by multiple concurrent users. The TPC-H Price/Performance metric is expressed as \$/QpH@Size.

For more information, please refer to <http://www.tpc.org/tpch/>.

**Table 1. Transaction Processing Performance Council Benchmark™ H (TPC-H) Top 5 TPC-H@3000GB Results - (24 March 2005)**

System	QpH	Price/QpH	System Availability	Operating System	Database	Submission Date	Cluster
Sun Fire E25K	59,435	\$114	07/27/05	Sun Solaris 10	Oracle 10g	01/27/05	N
HP Integrity Superdome Enterprise Server	45,247	\$109	03/25/04	HP UX 11.i 64-bit	Oracle 10g	09/25/03	N
Fujitsu Siemens Computers PRIMEPOWER2500	34,345	161 Euro	02/22/04	Sun Solaris 9	Oracle 10g	08/22/03	N
Fujitsu PRIMEPOWER 2500	34,345	\$147	02/22/04	Sun Solaris 9	Oracle 10g	08/26/03	N
Sun Fire™ 15K Server	28,948	\$184	04/30/03	Sun Solaris 9	Oracle 9i R2	04/07/03	N
HP 9000 Superdome Enterprise Server	27,094	\$213	10/30/02	HP UX 11.i 64-bit	Oracle 9i v.9.2.0.2.0	10/29/02	N

1. Date of submission 27 January 2005

2. Table 1. represents the top 5 performance results for TPC-H @3000GB submissions as of 24 March 2005 (Source: <http://www.tpc.org/tpch/results/03/24/2005>)

Get the details.

Sun's workgroup storage solutions:

[www.sun.com/storage/workgroup](http://www.sun.com/storage/workgroup)

Transaction Performance Council Benchmarks:

[www.tpc.org](http://www.tpc.org)

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