HP ProLiant DL585 G5 with new Quad-Core AMD Opteron™ processors takes #1 4P worldwide price/performance record on TPC-C benchmark
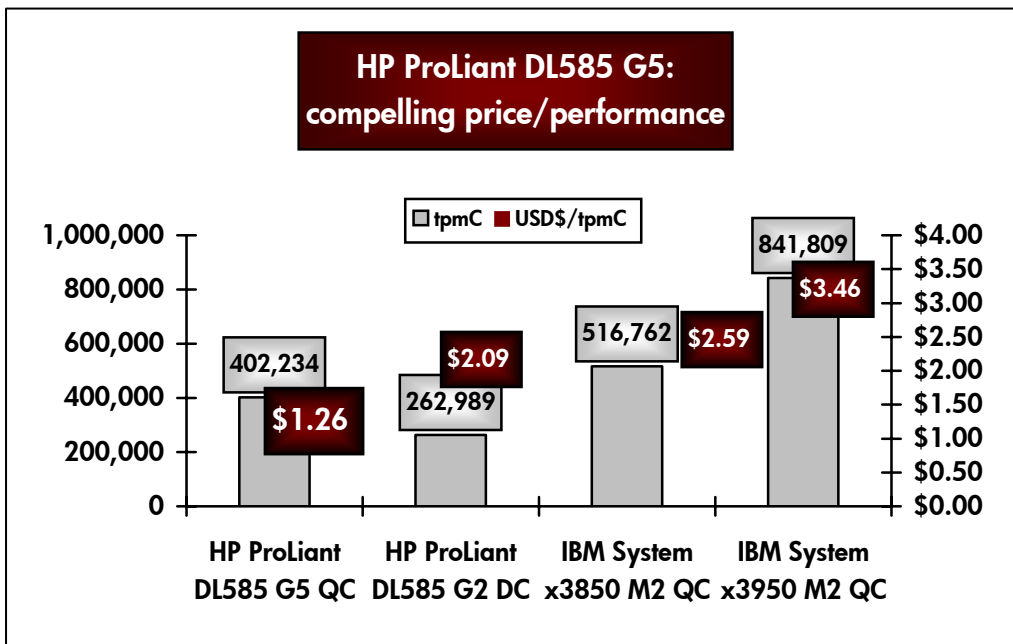
Key results at a glance:

- **Over 50% performance improvement on Quad-Core processors compared to the DL585 G2 Dual-Core result.**
- **The DL585 G5 achieved the top 4P price/performance result, at less than half the cost of the closest competitor.**
- **The DL585 G5 result is #7 on the Top Ten TPC-C price/performance list, and the only 4P result on that list.**
- **The DL585 G5 results bring the number of HP servers on the Top Ten TPC-C price/performance list to 5.**

HP announced new record-breaking results on the TPC-C benchmark for the HP ProLiant DL585 G5 on March 31, 2008. The HP ProLiant DL585 G5, configured with 4 x 2.3GHz Quad-Core AMD Opteron™ Model 8356 processors (4 processors/16 cores/16 threads) with 2 MB Cache and 128 GB DDR2 main memory, achieved **402,234 tpmC @ USD $1.26/tpmC** running Windows Server 2003 R2 Enterprise x64 Edition operating system and Microsoft SQL Server 2005 Enterprise x64 Edition SP2 database. The server utilized 1 Smart Array P600 SAS RAID controller connected to 24 x 146GB 10K SFF SAS drives for the log files, 6 Smart Array P800 SAS RAID controllers and 1 E500 SAS RAID controller to drive 700 15K SFF SAS drives housed in 28 HP StorageWorks MSA70 Enclosures. The internal drive bays which housed the operating system drives were connected to an 8 Internal Port SAS HBA.

Figure 1. Comparison of performance and price/performance results

HP ProLiant DL585 G5: compelling price/performance

	tpmC	USD$/tpmC
HP ProLiant DL585 G5 QC	402,234	$1.26
HP ProLiant DL585 G2 DC	262,989	$2.09
IBM System x3850 M2 QC	516,762	$2.59
IBM System x3950 M2 QC	841,809	$3.46

More information about TPC-C results can be found at the following Web page: http://www.tpc.org. Results as of 03-31-08.

As of the date of publication, the Dell PowerEdge 6950 and Sun Fire X4600 M2 did not have results posted. The IBM System x3950 M2 results posted are with 8 processors.

ProLiant DL585 G5 server – compelling price/performance

System (processors/cores/threads)	tpmC	USD$/tpmC	Availability	Database	OS
HP ProLiant DL585 G5 4P QC AMD Opteron Model 8356 2.3 GHz (4 processors/ 16 cores/16 threads	402,234	**$1.26**	03/31/08	Microsoft SQL Server 2005 Enterprise x64 Edition SP2	Windows Server 2003 R2 Enterprise x64 Edition
HP ProLiant DL585 G2 4P DC AMD Opteron Model 8220 SE 2.8 GHz (4 processors/8 cores/8 threads)	262,989	$2.09	03/26/07	Microsoft SQL Server 2005 x64 Enterprise Edt. SP1	Microsoft Windows Server 2003 Enterprise x64 Edition SP1
IBM System x3850 M2 4P QC Intel Xeon X7350 2.93 GHz (4 processors/16 cores/16 threads)	516,752	$2.59	03/14/08	IBM DB2 9.5 Enterprise Edition	Red Hat Enterprise Linux Adv. Platform 5 for x86_64
IBM System x3950 M2 8P QC Intel Xeon Quad-Core X7350 2.93GHz (8 processors/32 cores/32 threads)	841,809	$3.46	04/01/08	Microsoft SQL Server 2005 Enterprise x64 Edition	Microsoft Windows Server 2003 Enterprise x64 Ent. R2

HP innovative technology behind the results

HP ProLiant DL585 G5

The industry's 4-socket price/performance leading x86 rack server combines AMD processor technology, now with quad-core, best-in-class availability features, and unsurpassed flexibility in a system ideal for mission-critical data center deployments.

HP Smart Array Controller P600

The HP Smart Array P600 serial attached SCSI (SAS) controller provides new levels of performance and reliability for HP servers, through its support of the latest SCSI technology and advanced RAID capabilities. The first of a new generation of SAS Smart Array controllers, the SA-P600 once again raises the standards of performance offering twice the bandwidth of a 4-channel U320 array controller.

HP Smart Array Controller P800

The HP Smart Array P800 is a 16 port, PCI-E SAS controller. It ships standard with 512MB cache, dual batteries and RAID 6 (ADG) support. This controller supports up to 108 hard drives and is the highest performing controller in the Smart Array portfolio.

HP StorageWorks 70 Modular Smart Array

The HP StorageWorks 70 Modular Smart Array is an end-to-end flexible storage array, offering data availability, enhanced reliability, enhanced performance and tiered storage capability with SAS and SATA drives and investment protection. Small and midrange business growing storage

needs can be managed by deploying this low cost, flexible tiered storage system with up to 14.4 TB capacity supporting SAS or SATA.

TPC information

A full disclosure report describing these benchmark results has been filed with the Transaction Processing Performance Council (TPC) and is available upon request. The full disclosure report describes the benchmark hardware and software configuration in detail, provides costs, and lists the code actually used to perform the test. Similar reports from other vendors are the source of the price/performance comparisons provided above. Summaries of all tests are published each month by the TPC. Summaries are also posted on the Internet on the TPC's World Wide Web Server. With these benchmarks, customers can objectively compare the performance of different vendors' servers in specific areas such as database throughput in transactions per minute (tpmC) and cost per transactions per minute ($/tpmC).

For more information

HP ProLiant DL585 G5: www.hp.com/servers/dl585

HP ProLiant storage solutions: www.hp.com/go/serial

ProLiant benchmarks: www.hp.com/servers/benchmarks

TPC-C Overview White Paper: ftp://ftp.compaq.com/pub/products/servers/benchmarks/HP_ProLiant_tpcc_Overview.pdf

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