HP ProLiant DL585 G5 with Quad-Core AMD Opteron processors takes #1 4-socket worldwide price/performance record again on TPC-C benchmark

The HP Advantage

The HP ProLiant DL585 G5 is a highly manageable, rack-optimized, four-socket server designed for maximum performance in an industry standard architecture.

Key results at a glance:

n The ProLiant DL585 G5 achieved the top 4-socket price/performance result at less than 50% cost of the closest competitor.

n The server also achieved the #1 4-socket Microsoft Windows performance record, with over 51% performance improvement from the previous server generation, the ProLiant DL585 G2.

n The ProLiant DL585 result takes another position on the TPC-C Top Ten price/performance list, and is the ONLY 4-socket result on the list.

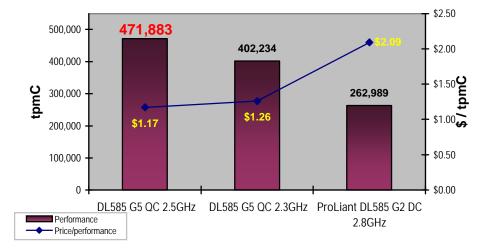n HP now has five of the Top Ten TPC-C price/performance results.

HP announced a record-breaking result again on the TPC-C benchmark for the HP ProLiant DL585 G5. The server, configured with 4 x 2.5GHz Quad-Core AMD Opteron™ Model 8360 SE processors (4 processors/16 cores/16 threads) with 2MB Cache and 256GB (32 x 8GB) DDR2 main memory, achieved 471,883 tpmC @ USD $1.17/tpmC running Windows Server 2003 R2 Enterprise x64 Edition SP1 operating system and Microsoft SQL Server 2005 Enterprise x64 Edition SP2 database. The server utilized one Smart Array P600 SAS RAID controller connected to 24 x 146GB 10K SFF SAS drives for the log files, six Smart Array P800 SAS RAID controllers and one E500 SAS RAID controller to 700 x 36GB 15K SFF SAS drives and one 36GB 15K SFF SAS drive 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.

The HP ProLiant DL585 G5 scales 51% in performance progressing from Dual-Core to Quad-Core processors with a 44% cost savings.

More information about all servers can be found at the following Web page: http://www.tpc.org.
Results as of 8-01-08

Figure 1. Comparison of TPC-C price/performance scalability with the HP ProLiant DL585 G5.

Technology for better business outcomes.

Prepared by the ESS Competitive Intelligence Team

ProLiant DL585 G5 server – undeniable price/performance

Table 1. TPC-C configurations.

System (processors/cores/threads)	tpmC	USD$/tpmC	Availability	Database	OS
HP ProLiant DL585 G5 4-socket, QC AMD Opteron 8360 SE 2.5GHz (4 processors/ 16 cores/ 16 threads)	471,883	$1.17	07/14/08	Microsoft SQL Server 2005 Enterprise x64 Edition SP2	Windows Server 2003 R2 Enterprise x64 Edition
HP ProLiant DL585 G5 4-socket QC AMD Opteron Model 8356 2.3GHz (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 4-socket DC AMD Opteron Model 8220 SE 2.8GHz (4 processors/8 cores/8 threads)	262,989	$2.09	03/26/07	Microsoft SQL Server 2005 x64 Enterprise Edition SP1	Microsoft Windows Server 2003 Enterprise x64 Edition SP1
IBM System x3850 M2 4-socket QC Intel Xeon X7350 2.93GHz (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 8-socket 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 Edition R2

Note: 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.

HP innovative technology behind the results

HP ProLiant DL585 G5

The HP ProLiant DL585 G5 is a highly manageable, rack-optimized, four-socket server designed for maximum performance in an industry standard architecture. With up to four Quad-Core AMD Opteron processors and a large memory footprint, the DL585 G5 delivers the performance and performance-per-watt needed for compute-hungry database, virtualization, and consolidation applications. Its industry leading remote management functions help reduce costs and improve the ability to respond quickly to business changes.

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 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-Express 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.

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: www.hp.com/servers/proliantdl585

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

For more information on TPC benchmarks: www.tpc.org

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