HP ProLiant DL380 G5 earns world record performance on TPC-C benchmark for single processor server

The HP ProLiant DL380 G5 is a versatile, dependable, workhorse server.

Key benefits include Multi-Core Intel Xeon performance for demanding scale-out applications and virtualization projects.

Key results at a glance:

n   More than TWICE the performance of Dell PowerEdge 2900 Dual-Core competitor.

n   70% better performance than IBM p5 Dual-Core competitor at 41% less cost!

n   Highest 4-socket and 1-processor outcome

n   First Quad-Core 1P result

The world's largest-selling server continues its history of performance distinction with the latest TPC-C benchmark reported on Feb. 13, 2007. The HP ProLiant DL380 G5, configured with 1 x 2.66GHz Intel Xeon X5355 Quad-Core processor (1 processor/4 cores/ 4 threads), with 8MB Cache and 32GB (4 x 8GB) DDR main memory, achieved 138,979/tpmC @USD$2.12/tpmC running Microsoft Windows 2003 Enterprise x64 Edition SP1 operating system and Microsoft SQL Server 2005 Enterprise x64 Edition SP1 database. The server also utilized HP 72GB and 36GB 15K Large Form Factor (LFF) Serial Attached SCSI (SAS) disk drives, 3 Smart Array P800 and 2 Smart Array E500 Controllers, and 34 HP MSA60 Storage Enclosures.

The ProLiant DL380 G5 accomplished the following superior performance deltas vs. its competitors:

- Bested the 1P IBM p5 520 rack server configured with a 1.65GHz POWER5+ processor: More than 70% the performance, at 41% less cost!
- Almost two times the performance of the 1P Dell PowerEdge 2900!
- This server in a single-processor configuration out-performed the best Dell 2-processor configuration on the TPC-C benchmark
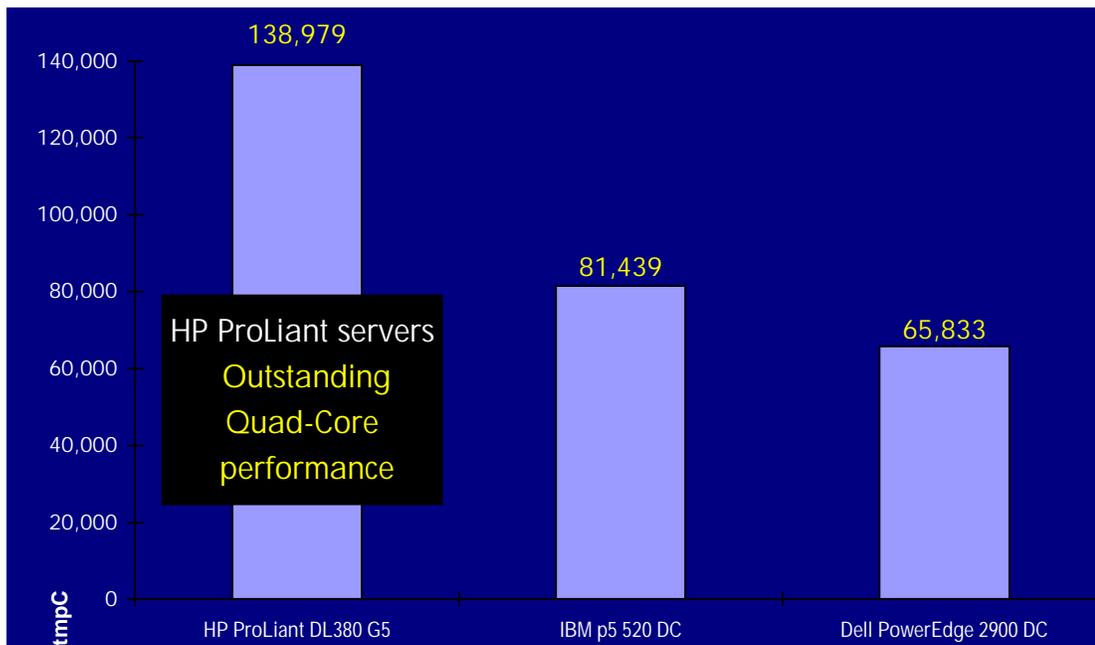

Figure 1. Comparison of performance results of the HP ProLiant DL380 G5 Quad-Core one-processor server vs. Dell and IBM one-processor results on the TPC-C benchmark.

With the HP ProLiant DL380 G5 benchmark, HP is now leader for 1P and 2P TPC-C performance with the ProLiant ML370 G5.

More information about all servers can be found at the following Web page: http://www.tpc.org.

Results as of 2-13-07.

Performance Brief – Produced by ESS Competitive Intelligence

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ProLiant DL380 G5 server leads competitors

Table 1. Results of TPC-C Performance Benchmark Results

System (processors/cores/threads)	tpmC	USD$/tpmC	Availability	Database	OS
HP ProLiant DL380 G5 1P	138,979	$2.12	03/26/07	Microsoft SQL Server 2005 Enterprise x64 Edition SP1	Microsoft Windows Server 2003 Enterprise x64 Edition SP1
IBM System p5 520 Model 9131-520 1P	81,439.30	$2.99	12/22/2006	Sybase ASE	SuSE Linux 9
Dell PowerEdge 2900 1P	65,833	$.98	06/26/06	Microsoft SQL Server 2005 Standard x64 Edition	Microsoft Windows Server 2003 Standard x64 Edition SP1
Dell PowerEdge 2800 2P	63,646	$2.28	05/10/05	Microsoft SQL Server 2000 Enterprise Ed. SP3	Microsoft Windows Server 2003 Enterprise Edition

Why HP wins in performance

The latest ProLiant DL380 G5 server

Performance

- Up to two Intel Xeon 5x00 sequence Dual-Core or Quad-Core processors with Intel VT technology to improve performance in a virtual environment.
- Up to 32GB of 667MHz DDR2 Fully-buffered DIMMs with interleaving, mirrored memory, and online spare capability.
- Four PCI-Express expansion slots standard, optional PCI-X.
- HP Smart Array P400 with 256MB read cache (Base and Performance models); or Smart Array E200 with 64MB read cache (Entry model). Both controllers are upgradeable with battery-backed write cache capabilities and larger read cache sizes.

Management

- Integrated Lights Out 2 (iLO 2) Management for high speed remote management.
- New Systems Insight Display for walk up system diagnostics.
- Smart power and thermal management. HP Power Regulator for policy-based power management and Power Meter reporting capability to log actual power usage.
- Dual multifunction Gigabit NICs with TOE to reduce network latency.

Reliability and Efficiency

- Expandable storage for support of up to eight high performance SAS drives.
- Highly versatile 2U rack design.
- Redundant fans standard; redundant power optional.
- Worldwide service and support options.

The HP ProLiant Advantage

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 MSA60

The HP StorageWorks 60 Modular Smart Array enclosure is a 2U SAS disk drive storage enclosure supporting 3.5″ SAS or SATA drives. This enclosure delivers industry-leading data performance, availability, storage density, and upgradeability to meet customers' demanding and growing storage needs. The MSA60 enclosure supports direct attach storage (DAS) to HP ProLiant Servers. The MSA60 supports the cascading of shelves in a 1+3 configuration to allow a maximum of 48 drives in an 8U configuration behind each port on the Smart Array P800 controller for a total of 96 drives in 8 enclosures.

For more information

HP ProLiant DL380 G5: www.hp.com/proliantdl380

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

TPC: Results valid as of February 13, 2007. Complete results can be found at http://www.tpc.org.

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).