HP ProLiant ML370 G5 with Quad-Core Intel® Xeon® processors takes #1 2P x86/64 worldwide performance record on TPC-C benchmark with Oracle Enterprise Linux OS and Oracle 10g database

Key results at a glance:

- **Excellent scalability on 3.16-GHz processors compared to ML370 G5 previous result, with 18% better price/performance**
- **The ML370 G5 achieves top 2P x86/64 performance results with 4 more DIMM slots and up to 5 more expansion slots than IBM x3500 and Dell PowerEdge 2900 competitors**

HP announced new record-breaking results on the TPC-C benchmark for the HP ProLiant ML370 G5 on November 12, 2007. The HP ProLiant ML370 G5, configured with 2 x 3.16GHz Quad-Core Intel® Xeon® 5460 processors (2 processors/8 cores/8 threads) with 12 MB Cache and 64 GB Fully Buffered DIMM main memory, achieved 273,666/tpmC @USD$1.38/tpmC running Oracle Enterprise Linux operating system and Oracle Database 10g Standard Edition One database. The server utilized 2 Smart Array P600 SAS RAID controller connected to 12 x 146GB 10K SFF SAS drives for the log files, and 7 SMART Array P800 SAS RAID controllers to drive 700 15K SFF SAS drives housed in 28 StorageWorks MSA70 Enclosures and the ML370 G5 internal drive bays.

Figure 1. Comparison of performance and price/performance results
More information about all servers can be found at the following Web page: http://www.tpc.org. Results as of 11-12-07.
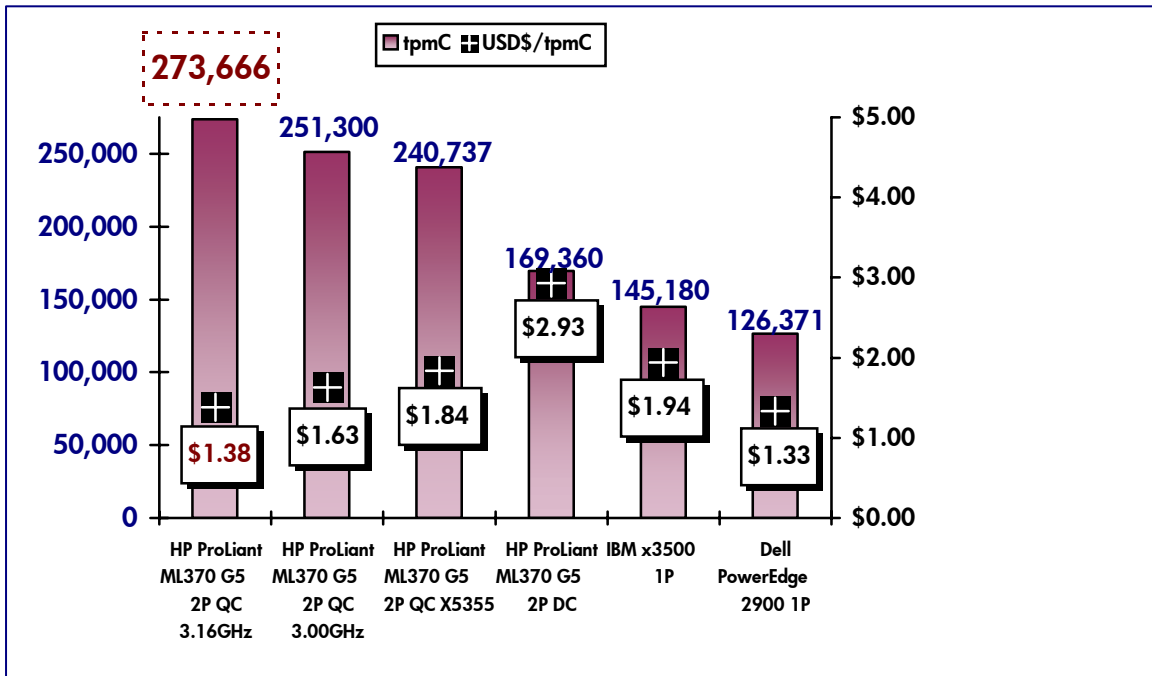
As of the date of publication, IBM and Dell competitors listed did not have x86/64 2P results. Sun Fire X4150 does not have results listed.

ProLiant ML370 G5 server – optimized for performance

Table 1. TPC-C configurations

System (processors/cores/threads)	tpmC	USD$/tpmC	Availability	Database	OS
HP ProLiant ML370 G5 2P QC Intel Xeon 5460 3.16GHz (2 processors/8 cores/8 threads)	273,666	1.38 US $	11/12/07	Oracle Database 10g Standard Edition One	Oracle Enterprise Linux
HP ProLiant ML370 G5 2P QC Intel Xeon 5365 3.0GHz (2 processors/8 cores/8 threads)	251,300	1.63 US $	09/5/07	Microsoft SQL Server 2005 Enterprise x64 Edition SP2	Microsoft Windows Server 2003 Enterprise x64 Edition SP1
HP ProLiant ML370 G5 2P QC Intel Xeon 5355 3.0GHz (2 processors/8 cores/8 threads)	240,737	1.84 US $	2/1/2007	Microsoft SQO Server 2005 Enterprise Edition SP1	Microsoft Windows Server 2003 Enterprise x64 Edition SP1
HP ProLiant ML370 G5 SAS 2P Intel 5160 3.0GHz DC (2 processors/4 cores/4 threads)	169,360	2.93 US $	11/22/06	Microsoft SQL Server 2005 Enterprise x64 Edition	Microsoft Windows Server 2003 Enterprise x64 Edition SP1
IBM System x3500 c/s Intel Quad-Core Xeon X5355 2.6GHz (1 processor/4 cores/4 threads)	145,180	1.94 US $	05/01/07	Microsoft SQL Server 2005 x64 Enterprise Edt SP2	Microsoft Windows Server 2003 Enterprise x64 Edt. (SP2)
PowerEdge 2900 Intel Xeon QC X5355 2.66Ghz (1 processor/4 cores/4 threads)	126,371	1.33 US $	06/08/07	Microsoft SQL Server 2005 x64 Enterprise Edt SP2	Microsoft Windows Server 2003 Enterprise Edition SP1

Why HP wins in performance

HP ProLiant ML370 G5

The flagship ML370 G5 provides industry-leading management, performance and availability in a dual processor expansion server engineered to excel in a variety of environments - from corporate work groups in growing businesses to critical remote sites requiring continuous accessibility and uptime.

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 ML370 G5: www.hp.com/servers/ml370

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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