HP ProLiant DL585 G2 and BL45p G2 servers best competitors on new SPEC CPU2006 benchmark with world records for performance

The ProLiant DL585 G2 achieved 4 worldwide records on the new SPEC CPU2006 benchmark:

- #1 OVERALL 4P SPECfp_rate2006
- #1 x86/64 4P SPECint_rate2006
- #1 x86/64 SPECfp_rate_base2006
- #1 x86/64 4P SPECint_rate_base2006

The ProLiant BL45p G2 came in a close second for the following SPEC CPU 2006 benchmarks:

- x86/64 4P SPECfp_rate2006
- x86/64 4P SPECint_rate2006
- x86/64 4P SPECint_rate_base2006

Key SPEC CPU2006 results at a glance:

The ProLiant DL585 G2 performed faster than competitors by:

- 41.6% overall 4P SPECfp_rate2006
- 38% for x86/64 4P SPECfp_rate_base2006
- 31.6% for x86/64 4P SPECint_rate2006
- 23.4% for x86/64 4P SPECint_rate_base2006

The ProLiant BL45p G2 was faster than competitors by:

- 41.2% overall 4P SPECfp_rate2006
- 37.8% for x86/64 4P SPECfp_rate_base2006
- 31.5% for x86/64 4P SPECint_rate2006
- 23.1% for x86/64 4P SPECint_rate_base2006

HP announced its worldwide performance records for the new SPEC CPU2006 benchmarks on March 21, 2007.

ProLiant DL585 G2: The ProLiant DL585 G2 took the top number for overall and x86/64 4P SPECfp_rate2006 with a result of 91.3, defeating Sun, IBM, and Itautec competitors. The server also took the x86/64 4P SPECint_rate_base2006 with a score of 87.2, topping Sun, IBM, and Itautec competition. In addition, the ProLiant DL585 G2 achieved #1 in the x86/64 4P SPECint_rate2006 with a result of 98.3, besting Sun, IBM, and Itautec and also placed #1 in the x86/64 4P SPECfp_rate_base2006 with a result of 86.1, defeating Sun, IBM, and Itautec again.

On all benchmarks, the ProLiant servers were equipped with 4x2.8GHz (8 cores, 4 chips, 2 cores/chip) AMD Opteron 8220SE processors running SuSE Linux Enterprise Server 9 (x86-64) SP3.

ProLiant BL45p G2: The ProLiant BL45p G2 ran a strong second with a result of 90.7 for the x86/64 4P SPECfp_rate2006, beating Sun, IBM, and Itautec competitors. The server also placed second in the x86/64 4P SPECint_rate_base2006 with a score of 86.9, defeating Sun, IBM, and Itautec competition. Moreover, the ProLiant BL45p took #2 in the x86/64 4P SPECint_rate2006 with a result of 98.2, topping Sun, IBM, and Itautec and also achieved second in the x86/64 4P FP Throughput Base with a result of 85.7, winning over Sun, IBM, and Itautec once more.

On all benchmarks, the ProLiant servers were equipped with 4x2.8GHz (8 cores, 4 chips, 2 cores/chip) AMD Opteron 8220 processors running SuSE Linux Enterprise Server 9 (x86-64) SP3.

All ProLiant and competitor results and configurations are found in Appendix A at the end of this paper or at the SPEC web site at: www.spec.org.
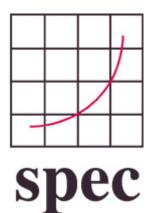
About SPEC CPU2006

SPEC CPU2006 was developed by SPEC's Open Systems Group (OSG). It measures component- and system-level performance for a wide variety of operating systems and hardware that ranges from desktop systems to workstations to large-scale servers.

SPEC CPU2006 replaces SPEC CPU2000, which was phased out. Performance results from SPEC CPU2006 cannot be compared to those from CPU2000, since new benchmarks have been added and existing ones changed.

What the benchmark measures

SPEC CPU2006 includes two benchmark suites: CINT2006 for measuring compute-intensive integer performance, and CFP2006 for compute-intensive floating point performance.

Performance: One reason why HP is the #1 worldwide server shipment vendor

Leading performance results are just some of the reasons HP is still the #1 vendor in worldwide server shipments for the 19th consecutive quarter in the past five years.[1]

For the 42nd consecutive quarter, more than 10 years, HP (combined with Compaq) is the x86 server market share leader in both factory revenue and units.[1]

HP grew x86 revenue and units year-over-year faster than the overall market. Dell and IBM both had year-over-year declines in x86 units. In a single quarter, HP shipped 6 times as many x86 servers as Sun in the full year 2006. In addition, HP's x86 revenue share was 13.8 percentage points higher than its nearest competitor, IBM.

In the x86-64 based server segment, HP was No. 1 in factory revenue and units shipped, with year-over-year unit shipment growth of 28.8 percent. This includes both AMD Opteron™ and Intel® x86-64 Xeon™-based servers.

HP remains the leading provider of AMD Opteron processor-based servers and server blades, with a commanding 42.8 percent of factory revenue share. HP shipped more than 4 times the Opteron servers as #2, Sun, and more than 6.9 times than IBM. HP grew Opteron revenue, 67.2% year-over-year while IBM declined 3.6% year-over-year.

For more information

HP ProLiant DL585 G2: www.hp.com/servers/proliantdl585

HP ProLiant BL45p: www.hp.com/servers/proliantbl45p

SPEC, the SPEC logo, and the benchmark names SPECint and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation (SPEC). The SPEC logo is © 2007 Standard Performance Evaluation Corporation (SPEC), reprinted with permission. Herein comparison presented above is based on the top performing 4P servers. The competitive benchmark results stated herein reflect results published on www.spec.org as of March 21, 2007.

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Appendix A

Configurations and Results of ProLiant DL585 G2 overall 4P SPECfp_rate2006 vs. competitors

ProLiant DL585 G2. AMD Opteron 8220SE. 8 cores, 4 chips, 2 cores/chip. Result: 91.3.

Sun Microsystems Sun Blade x8420. AMD Opteron 8220. 8 cores, 4 chips, 2 cores/chip. Result: 87.3.

IBM BladeCenter LS41. AMD Opteron 8220. 8 cores, 4 chips, 2 cores/chip. Result: 57.1.

Itautec Servidor Itautec ZX440. 3.4GHz Intel Xeon 7140M. 8 cores, 4 chips, 2 cores/chip. Result: 53.3.

Configurations and Results of ProLiant DL585 G2 and BL45p G2 x86/64 4P SPECfp_rate2006 vs. competitors

ProLiant DL585 G2. 2.8GHz AMD Opteron 8220SE. 8 cores, 4 chips, 2 cores/chip. Result: 91.3.

ProLiant BL45p G2. 2.8GHz AMD Opteron 8220. 8 cores, 4 chips, 2 cores/chip. Result: 90.7.

Sun Microsystems Sun Blade x8420. 2.8GHz AMD Opteron 8220. 8 cores, 4 chips, 2 cores/chip. Result: 87.3.

IBM BladeCenter LS41. 2.8GHz AMD Opteron 8220. 8 cores, 4 chips, 2 cores/chip. Result: 57.1.

Itautec Servidor Itautec ZX440. 3.4GHz Intel Xeon 7140M. 8 cores, 4 chips, 2 cores/chip. Result: 53.3.

Configurations and Results of ProLiant DL585 G2 and BL45p G2 x86/64 4P SPECint_rate_base2006 vs. competitors

ProLiant DL585 G2. 2.8GHz AMD Opteron 8220SE. 8 cores, 4 chips, 2 cores/chip. Result: 87.2.

ProLiant BL45p G2. 2.8GHz AMD Opteron 8220. 8 cores, 4 chips, 2 cores/chip. Result: 86.9.

Sun Microsystems Sun Blade x8420. 2.8GHz AMD Opteron 8220. 8 cores, 4 chips, 2 cores/chip. Result: 80.4.

IBM BladeCenter LS41. 2.8GHz AMD Opteron 8220. 8 cores, 4 chips, 2 cores/chip. Result: 78.8.

Sun Microsystems Sun Fire X4600 M2. 2.8GHz AMD Opteron 8220. 8 cores, 4 chips, 2 cores/chip. Result: 76.9

Itautec Servidor Itautec ZX440. 3.4GHz Intel Xeon 7140M. 8 cores, 4 chips, 2 cores/chip. Result: 67.2.

IBM System X3850. 3.5GHz Intel Xeon 7150N. 8 cores, 4 chips, 2 cores/chip. Result: 66.9.

IBM System X3800. 3.5GHz Intel Xeon 7150N. 8 cores, 4 chips, 2 cores/chip. Result: 66.8.

Configurations and Results of ProLiant DL585 G2 and BL45p G2 x86/64 4P SPECint_rate2006 vs. competitors

ProLiant DL585 G2. 2.8GHz AMD Opteron 8220SE. 8 cores, 4 chips, 2 cores/chip. Result: 98.3.

ProLiant BL45p G2. 2.8GHz AMD Opteron 8220. 8 cores, 4 chips, 2 cores/chip. Result: 98.2.

Sun Microsystems Sun Blade x8420. 2.8GHz AMD Opteron 8220. 8 cores, 4 chips, 2 cores/chip. Result: 93.

IBM BladeCenter LS41. 2.8GHz AMD Opteron 8220. 8 cores, 4 chips, 2 cores/chip. Result: 88.4.

Itautec Servidor Itautec ZX440. 3.4GHz Intel Xeon 7140M. 8 cores, 4 chips, 2 cores/chip. Result: 67.2.

Configurations and Results of ProLiant DL585 G2 and BL45p G2 x86/64 4P SPECfp_rate_base2006 vs. competitors

ProLiant DL585 G2. 2.8GHz AMD Opteron 8220SE. 8 cores, 4 chips, 2 cores/chip. Result: 86.1.

ProLiant BL45p G2. 2.8GHz AMD Opteron 8220. 8 cores, 4 chips, 2 cores/chip. Result: 85.7.

Sun Microsystems Sun Blade x8420. 2.8GHz AMD Opteron 8220. 8 cores, 4 chips, 2 cores/chip. Result: 82.5.

IBM BladeCenter LS41. 2.8GHz AMD Opteron 8220. 8 cores, 4 chips, 2 cores/chip. Result: 54.7.

Itautec Servidor Itautec ZX440. 3.4GHz Intel Xeon 7140M. 8 cores, 4 chips, 2 cores/chip. Result: 45.6