#1 8-socket/32-core records with HP ProLiant DL785 G5 on SPEC® CPU2006 benchmark

HP Leadership and Customer Value

What are the benefits of using the HP ProLiant DL785 G5 for compute-intensive integer-math based workloads?

The SPEC CPU2006 rate metrics (e.g., SPECint_rate2006) measure the throughput or rate of a machine carrying out a number of simultaneous tasks. The SPEC CPU2006 benchmark is intended to stress the computer processor (CPU), the memory architecture, the compilers, and the chipset/front side bus, and does not measure I/O pathway performance.

The 8-socket workhorse HP ProLiant DL785 G5 is an ideal choice for growing enterprise class database, consolidation and virtualization environments, a balanced platform suitable for any number of applications, including for compute-intensive integer-math based workloads.

This SPEC CPU2006 benchmark result demonstrates that HP customers can run compute-intensive Linux solutions on the HP ProLiant DL785 8-socket server with confidence.

This latest result is one of many historical world record results that have been achieved by ProLiant servers on the SPEC CPU2006 benchmark. HP posts a large number of results, regularly updating benchmark standings. This shows the HP commitment to providing information that customers need for purchase decisions.
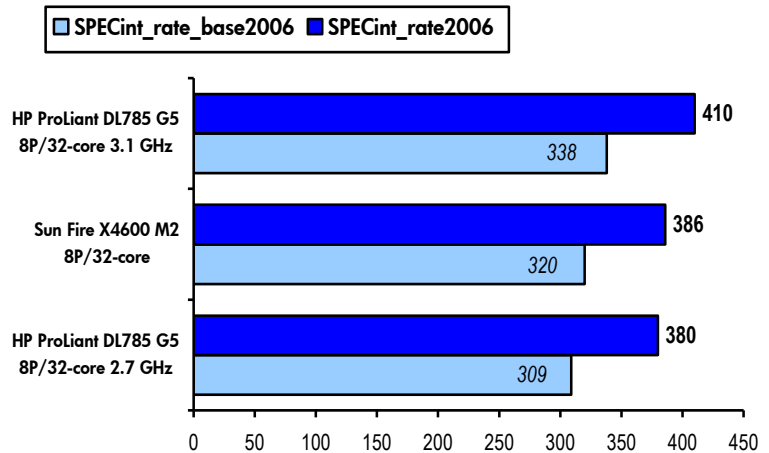
More information about SPEC CPU2006 results can be found at the following Web page: http://www.spec.org.
Results as of 04-27-09.

Key Points

HP announced its latest worldwide performance records for the SPEC® CPU2006 benchmark on April 22, 2009, for an eight-processor configuration. The ProLiant DL785 G5 with the AMD Opteron™ processor Model 8393SE achieved two new records for performance on the SPEC CPU2006 benchmark:

- #1 8-socket/32-core x86_64 SPECint®_rate_base2006 and SPECint_rate2006 results
- Up to 6% better performance than the Sun Fire X4600 M2
- HP ProLiant DL785 G5 continues to post updated results, showing the HP commitment to provide information customers need.

Figure 1. DL785 G5 and other results on SPEC CPU2006 benchmark

Legend: ☐ SPECint_rate_base2006 ■ SPECint_rate2006

System	SPECint_rate_base2006	SPECint_rate2006
HP ProLiant DL785 G5 8P/32-core 3.1 GHz	338	410
Sun Fire X4600 M2 8P/32-core	320	386
HP ProLiant DL785 G5 8P/32-core 2.7 GHz	309	380

What SPEC CPU2006 measures

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. SPEC CPU2006 includes two benchmark suites:

- CINT2006 for measuring compute-intensive integer performance and
- CFP2006 for compute-intensive floating point performance.

Interpreting the results

The eight-processor configuration of the HP ProLiant DL785 G5 equipped with the latest Quad-Core AMD Opteron processor Model 8389 provides the following superior performance deltas:

For x86_64 SPECint_rate_base2006 and SPECint_rate2006:
- 5.6% and 6.2% better performance than the Sun Fire X4600 M2[1]
- 9% and 7.8% increase over previous DL785 G5 result with 2.9-GHz processors[2]

All ProLiant and competitor SPEC CPU2006 results and configurations can be found at the SPEC web site at: www.spec.org.

For more information

HP ProLiant DL785 G5: www.proliant/servers/dl785

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

HP Red Hat Enterprise Linux for ProLiant, BladeSystem, and Integrity Servers: www.hp.com/go/rhelservers/

SPEC CPU2006 overview white paper:
ftp://ftp.compaq.com/pub/products/servers/benchmarks/SPEC_CPU2006_Overview_101907.pdf

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Appendix A

Configuration of HP ProLiant DL785 G5 #1 overall x86_64 SPECint_rate_base2006
ProLiant DL785 G5. 3.1 GHz AMD Opteron 8393SE. 32 cores, 8 chips, 32 cores/chip. Result: 338.
Configuration of HP ProLiant DL785G5 #1 overall x86_64 SPECint_rate2006
ProLiant DL785 G5. 3.1 GHz AMD Opteron 8393SE. 32 cores, 8 chips, 32 cores/chip. Result: 410.

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[1] Sun Fire X4600 M2, 2.7 GHz AMD Opteron 8384, 32 cores, 8 chips, 4 cores/chip, SPECint_rate_base2006 result 320, SPECint_rate 386.