HP ProLiant DL785 G5 achieves overall x86_64 records on SPEC® CPU2006 benchmark

HP Leadership

DL785 G5: a leader in compute-intensive integer-math based performance

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 11-17-08.

Technology for Better Business Outcomes

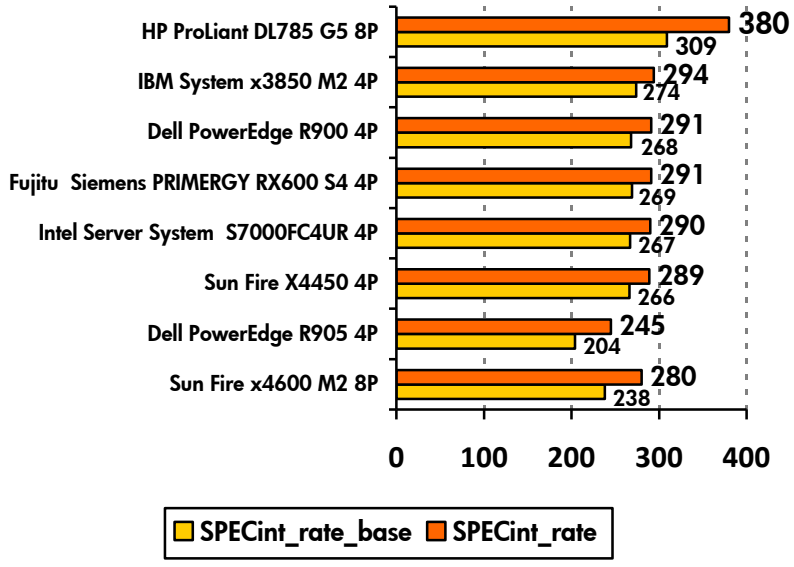
Key Points

- **#1 overall x86_64 SPECint®_rate_base2006 and SPECint_rate2006 results**

HP announced its latest worldwide performance records for the SPEC® CPU2006 benchmark on November 17, 2008, for an eight-processor configuration. The ProLiant DL785 G5 with the AMD Opteron™ processor Model 8384 achieved two new records on the SPEC CPU2006 benchmark:

#1 overall x86_64 SPECint_rate_base2006 (309)
#1 overall x86_64 SPECint_rate2006 (380)

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



These leading SPECint_rate2006 and SPECint_rate_base2006 results demonstrate that HP customers can obtain outstanding performance with compute-intensive workloads on the HP ProLiant DL785 8-socket server running the Red Hat Enterprise Linux 5 operating system.

Interpreting the results

The eight-processor configuration of the HP ProLiant DL785 G5 equipped with the latest Quad-Core AMD Opteron processor Model 8384 provides the following superior performance deltas:

For x86_64 SPECint_rate_base_2006 and x86_64 SPECint_rate2006:

- 12% and 29% better performance than the IBM System x3850 M2[1]
- 15% and 30% better performance than the Dell PowerEdge R900[2]
- 14% and 30% better performance than the Fujitsu Siemens PRIMERGY RX600 S4[3]
- 15% and 31% better performance than the Intel Server System s7000 FC4UR[4]
- 16% and 31% better performance than the Sun Fire X4450[5]
- 51% and 55% better performance than the Dell PowerEdge R905[6]
- 29% and 35% better performance than the Sun Fire X4600 M2[7]

All ProLiant and competitor SPEC CPU2006 results and configurations can be found 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.

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

---

[1] IBM System x3850 M2, 2.66 GHz Intel Xeon X7460, 24 cores, 4 chips, 6 cores/chip, SPECint_rate_base2006 result 274, SPECint_rate2006 result 294.
[2] Dell PowerEdge R900,2.66 GHz Intel Xeon X7460, 24 cores, 4 chips, 6 cores/chip, SPECint_rate_base2006 result 268, SPECint_rate2006 result 291
[3] Fujitsu PRIMERGY RX600 S4, 2.66 GHz Intel Xeon X7460, 24 cores, 4 chips, 6 cores/chip, SPECint_rate_base2006 result 269, SPECint_rate2006 result 291.
[4] Intel Server System s7000 FC4UR, 2.66 GHz Intel Xeon X7460, 24 cores, 4 chips, 6 cores/chip, SPECfp SPECint_rate_base2006 result 267, SPECint_rate2006 result 290.
[5] Sun Fire X4450, 2.66 GHz Intel Xeon X7460, 24 cores, 4 chips, 6 cores/chip. SPECint_rate_base2006 result 266, SPECint_rate2006 result 289.
[6] Dell PowerEdge R905, 2.7 GHz AMD Opteron 8384, 16 cores, 4 chips, 4 cores/chip. SPECint_rate_base2006 result 204, SPECint_rate2006 result 245.
[7] Sun Fire X4600 M2, 2.3 GHz AMD Opteron 8356, 16 cores, 4 chips, 4 cores/chip. SPECint_rate_base2006 result 238, SPECint_rate2006 result 280.

Performance Evaluation Corporation (SPEC). The SPEC logo is © 2008 Standard Performance Evaluation Corporation (SPEC), reprinted with permission. The competitive benchmark results stated herein reflect results published on www.spec.org as of November 17, 2008.

Appendix A

Configuration of HP ProLiant DL785 G5 #1 overall x86_64 SPECint_rate_base2006
ProLiant DL785 G5. 2.7GHz AMD Opteron 8384. 32 cores, 8 chips, 32 cores/chip. Result: 309.
Configuration of HP ProLiant DL785G5 #1 overall x86_64 SPECint_rate2006
ProLiant DL785 G5. 2.7GHz AMD Opteron 8384. 32 cores, 8 chips, 32 cores/chip. Result: 380.

November 2008