

HP ProLiant DL785 G6 wins records on SPEC® CPU2006

Another amazing 48-core result with new Six-Core AMD Opteron™ processors and Red Hat Linux



- SPECint_rate2006: #1 result for 8-socket or less single-node systems
- SPECfp_rate2006: #1 x86_64 result for 8-socket or less single-node systems
- SPECint_rate2006: up to 2.03X scaling vs. 4-socket platforms
- SPECfp_rate2006: up to 1.836X scaling vs. 4-socket platforms

HP performance brief

Benchmark:
SPEC® CPU2006

#1 SPECint_rate2006 result for 8-socket or less single-node systems

The HP ProLiant DL785 G6 achieved a SPECint_rate2006 score of 800.

#1 x86_64 SPECfp_rate2006 result for 8-socket or less single-node systems.

The HP ProLiant DL785 G6 achieved a SPECfp_rate2006 score of 513.

Excellent scalability

The DL785 G6 results delivered up to 2.03X scaling versus four-socket servers, up to more than double the performance, and up to 1.51X better performance than the 8-socket competitor.

Business outcomes

With this result, the DL785 G6 and Red Hat Linux operating system show a powerful capability to deliver excellent compute-intensive integer and floating point performance.

Figures 1 and 2. DL785 G6 and other results on SPECfp_rate2006 submetric

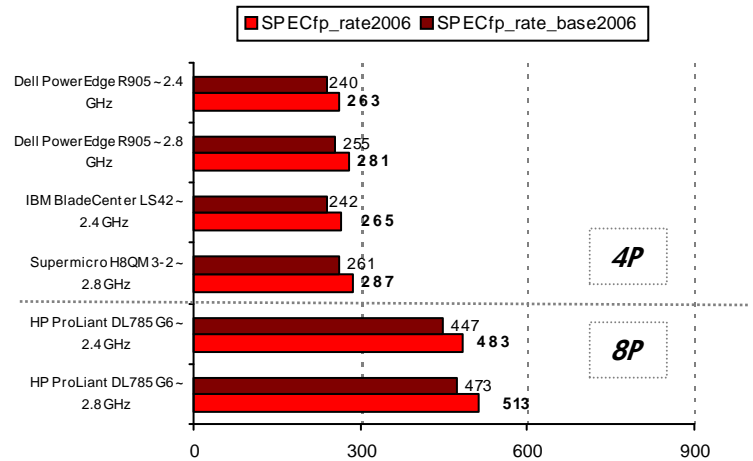
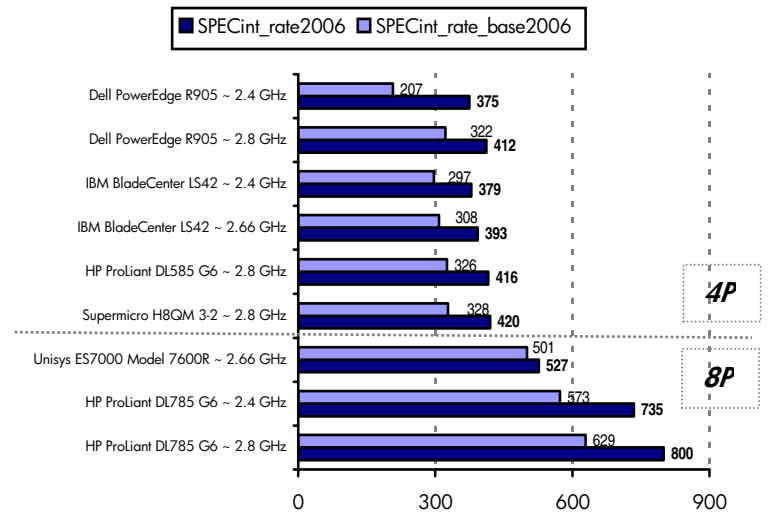


Figure 2. DL785 G6 and other results on SPECint_rate2006 submetric



Test results as of 09-01-09.



Powered by latest AMD six-core Opteron Processors, the **HP ProLiant DL785 G6** is the next generation server of the award winning HP ProLiant DL785 G5, still offering all the familiar and easy to use ProLiant management tools and options as well as new enhancements.

The DL785 G6 offers enhanced power management, support for power monitoring, regulation, and capping, and support for HP Insight Power Manager.

What are the benefits of using the HP ProLiant DL785 G6 for compute-intensive integer-math and floating point based workloads?

The 8-socket workhorse HP ProLiant DL785 G6 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 and floating point 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.

Interpreting the results

The 8-processor configuration of the HP ProLiant DL785 G6 equipped with the Six-Core AMD Opteron processors Model 8439SE provided the following performance deltas. (Same processors type was used by competitors unless otherwise noted.)

For SPECfp_rate_base2006 and SPECfp_rate2006 ProLiant DL785 G6 with 2.8 GHz AMD Opteron processors Model 8439SE:

■ 1.81X and 1.787X versus Supermicro H8QM3-2 ■ 1.83X and 1.81X versus HP ProLiant DL585 G6 ■ 1.85X and 1.82X versus Dell PowerEdge R905

For SPECfp_rate_base2006 and SPECfp_rate2006 ProLiant DL785 G6 with 2.4 GHz AMD Opteron processors Model 8431:

■ 1.847X and 1.82X versus IBM BladeCenter LS42 ■ 1.86X and 1.836X versus Dell PowerEdge R905

For SPECint_rate_base2006 and SPECint_rate2006 ProLiant DL785 G6 with 2.8 GHz AMD Opteron processors Model 8439SE:

■ 1.25X and 1.51X versus Unisys ES7000 Model 7600 R (8-processor 2.66 GHz Intel Xeon) ■ 1.917X and 1.90X versus Supermicro H8QM3-2 ■ 1.929X and 1.923X versus HP ProLiant DL585 G6 ■ 1.95X and 1.94X versus Dell PowerEdge R905 ■ 2.04X and 2.03X versus IBM BladeCenter LS42 (2.66 GHz Intel Xeon processors)

For SPECint_rate_base2006 and SPECint_rate2006 ProLiant DL785 G6 with 2.4 GHz AMD Opteron processors Model 8431:

■ 1.14X and 1.39X versus Unisys ES7000 Model 7600R (8-processor 2.66 GHz Intel Xeon) ■ 1.86X and 1.91X versus IBM BladeCenter LS42 (2.66 GHz Intel Xeon processors) ■ 1.929X and 1.939X versus IBM BladeCenter LS42 ■ 1.935X and 1.96X versus Dell PowerEdge R905

What SPEC CPU2006 measures

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. 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.

Appendix

Configuration of HP ProLiant DL785 G6 SPECint_rate_base2006 #1 x86_64 8-socket or less single-node system: 2.8 GHz AMD Opteron 8439SE. 48 cores, 8 chips. 6 cores/chip. Result: 629.

Configuration of HP ProLiant DL785 G6 SPECint_rate2006 #1 x86_64 8-socket or less single-node system: 2.8 GHz AMD Opteron 8439SE. 48 cores, 8 chips. 6 cores/chip. Result: 800.

Configuration of HP ProLiant DL785 G6 SPECfp_rate_base2006 #1 8-socket or less single-node system: 2.8 GHz AMD Opteron 8439SE. 48 cores, 8 chips. 6 cores/chip. Result: 513.

Configuration of HP ProLiant DL785 G6 SPECfp_rate2006 #1 8-socket or less single-node system: 2.8 GHz AMD Opteron 8439SE. 48 cores, 8 chips. 6 cores/chip. Result: 473.

More information about SPEC CPU2006 results can be found at the following Web page: <http://www.spec.org>. Results as of 09-01-09.

Technology for better business outcomes

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