

HP ProLiant DL120 G5 tops Dell for energy efficient 1P performance on SPECpower_ssj™2008 benchmark

The HP Difference

The HP ProLiant DL120 G5 server is a new low-cost, entry level, rack-optimized server. Low on cost, but not short on performance, this 1U server provides a platform delivering high capacity storage for a variety of rack deployments and applications.

Key results at a glance:

- Excellent energy-efficient performance for 1-processor performance on the SPECpower_ssj™2008 benchmark.
- The ProLiant DL120 G5 result defeated competitor Dell PowerEdge R300 by 13.5%.
- The performance result demonstrates how HP two-processor servers optimize the latest Quad-Core Intel® Xeon® technology utilizing the X processors for energy efficiency and high performance computing.

The HP ProLiant DL120 G5 performed outstanding energy efficient 1P performance on the SPECpower_ssj™2008 benchmark with a one-processor performance of 908 overall ssj_ops/watt. This result defeated the Dell PowerEdge R300 one-processor competitor. SPECpower_ssj™2008 is the first generation SPEC benchmark for evaluating the power and performance characteristics of server class computers. This measurement provides a way to compare the power/performance or energy efficiency of servers. With multiple SPECpower_ssj2008 benchmark world records in as many months, HP demonstrates that its ProLiant servers, built upon the latest industry-standard technology, is an industry leader in energy efficiency.

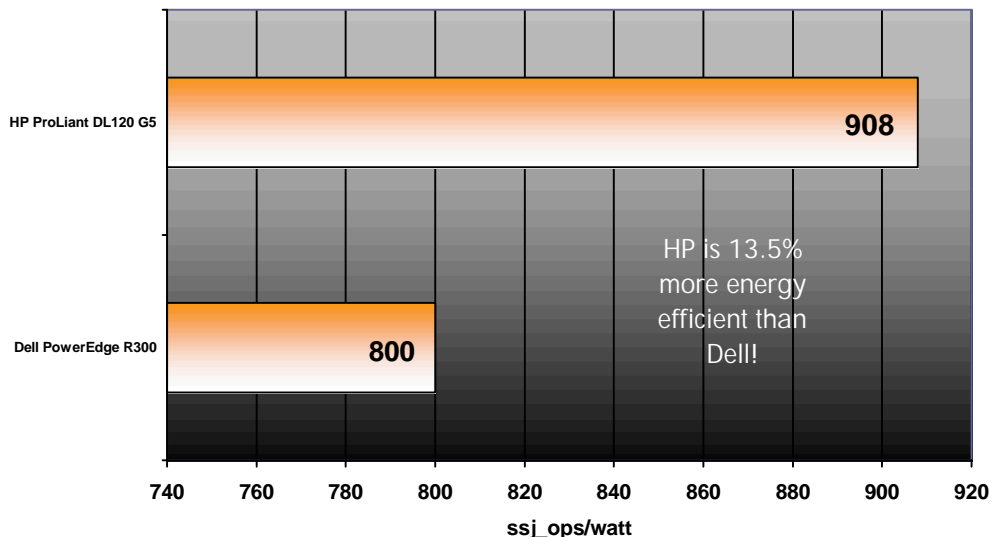
The HP ProLiant DL120 G5 earned superb energy efficiency performance



More information about SPECpower benchmark results for all servers can be found at the following Web page:
http://www.spec.org/power_ssj2008

Figure 1: Comparison of SPECpower_ssj™2008 results of the HP ProLiant DL120 G5 one-processor Quad-Core server vs. Dell PowerEdge R300 one-processor Quad-Core server (All results as of 6-24-08).

HP ProLiant DL120 G5 defeats Dell one-processor Quad-Core server on SPECpower_ssj2008



ProLiant server configurations

The energy-efficient HP ProLiant DL120 G5 was configured with an Intel Xeon X3360 2.83GHz processor with 4 cores/1 chip/4 cores per chip, 2x6 MB L2 shared cache, 1333MHz system bus, 4 x 2048 MB PC2-6400E CL6 RAM, 1 x 160GB 7.2K SATA hard drive, and an Integrated SATA controller.

The ProLiant DL120 G5 was running Microsoft Windows Server 2003 x64 Enterprise Edition (EE) R2 and used one 350W power supply.

Competition comparison

Table 1. Configuration comparison of one-processor benchmark results

2-socket server	overall ssj_ops/watt	Operating System
HP ProLiant DL120 G5 Intel Xeon X3360, QC, 4/1/4, 8GB RAM LP	908	Microsoft Windows Server 2003 x64 Enterprise Edition R2
Dell PowerEdge R300 Intel Xeon L5410, QC, 4/1/4, 8GB RAM	800	Microsoft Windows Server 2003 x64 Enterprise Edition R2 SP2

All results as of 06-24-08. More details on configurations can be found at http://www.spec.org/power_ssj2008/results/

Other HP ProLiant #1 Positions

In addition to the ProLiant DL120 G5's recent #1 excellent performance record, HP holds two world energy-efficient records: the #1 two-processor record with the HP ProLiant DL180 G5 and the #1 four-processor record with the ProLiant DL580 G5 SPECpower_ssj2008 result with 546 overall ssj_ops/watt. No other vendor has submitted a 4P result.

What SPECpower_ssj2008 measures

Currently, many vendors report some energy-efficiency figures, but these are often not directly comparable due to differences in workload, configuration, test environment, etc. SPEC defines server power measurement standards in the same way it has done for performance. Development of this benchmark provides a means to measure power in conjunction with a performance metric. This should help IT managers to consider power characteristics along with other selection criteria to increase the efficiency of data centers.

Being a Standard Performance Evaluation Corporation (SPEC) benchmark, SPECpower_ssj™2008 is a consortium-policed benchmark that provides a way for server vendors to compare benchmark results in a fair manner.

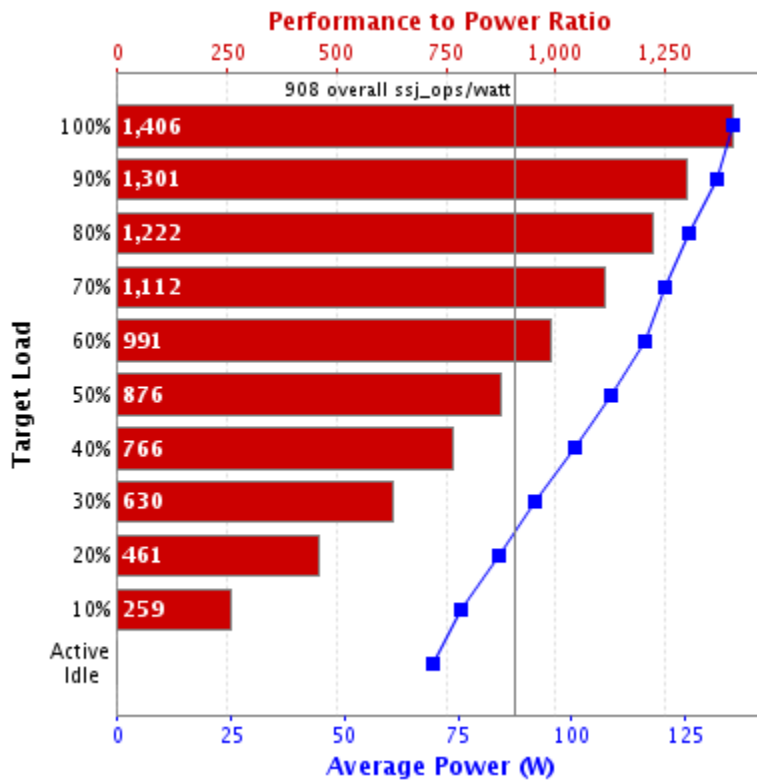
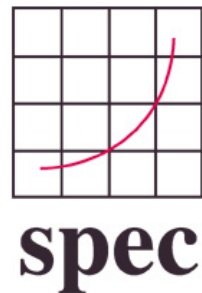


Figure 2. The SPECpower_ssj™2008 primary metric is the “overall ssj_ops/watt”. The HP ProLiant DL120 G5 showed a 908 overall ssj_ops/watt ratio. This metric is computed by taking the sum of the ssj_ops scores for all target loads, and then dividing by the sum of the power consumption averages for all target loads – including the “active idle” (0% utilization) measurement interval.



For more information

HP ProLiant DL120 G5: www.proliant/servers/dl120g5

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

For more information on SPEC benchmarks: www.spec.org

Overview of the SPECpower_ssj2008 benchmark:

ftp://ftp.compaq.com/pub/products/servers/benchmarks/specpower_ssj_overview.pdf

© 2008 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

SPEC, the SPEC logo, and the benchmark names SPEC cpu2006, SPECweb2005, SPECjAppServer2004, SPECpower_ssj2008 are registered trademarks of the Standard Performance Evaluation Corporation (SPEC). SPEC and the benchmark name SPECpower_ssj are trademarks of the Standard Performance Evaluation Corporation. Benchmark results stated above reflect results published on <http://www.spec.org> as of June 24, 2008. For the latest SPECpower_ssj2008 benchmark results, visit http://www.spec.org/power_ssj2008. The SPEC logo is © 2008 Standard Performance Evaluation Corporation (SPEC), reprinted with permission.

June 2008