

# HP ProLiant DL180 G5 takes giant lead over competitors with #1 energy efficient performance on SPECpower\_ssj™ 2008 benchmark

## The HP Difference

The new ProLiant DL180 G5 is a 2U, dual processor server designed for quality, performance, and flexible deployments to meet the needs of the emerging markets, SMB market, and corporate scale out.

## Key results at a glance:

- ProLiant leadership with the #1 overall rating on the SPECpower\_ssj™ 2008 benchmark.
- The ProLiant DL180 G5 result defeated the next competitor, Dell PowerEdge 2950 III, by 14%.
- The performance result demonstrated how HP two-processor servers optimized the latest Quad-Core Intel® Xeon® technology utilizing the E processors for energy efficiency and high performance computing.
- The ProLiant DL180 G5 joins the ProLiant DL160 G5 at the top of the SPECpower\_ssj2008 list

The new year brings a new record for one of HP's newest servers. The HP ProLiant DL180 G5 accomplished a world record for energy efficient performance on the SPECpower\_ssj™ 2008 benchmark with a two-processor performance of 778 overall ssj\_ops/watt. This result defeated competitors, including Dell and Intel. 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 energy efficiency of servers. With the second SPECpower\_ssj2008 benchmark world record in as many months, HP demonstrates that its ProLiant servers, built upon the latest industry-standard technology, are also energy-optimized.

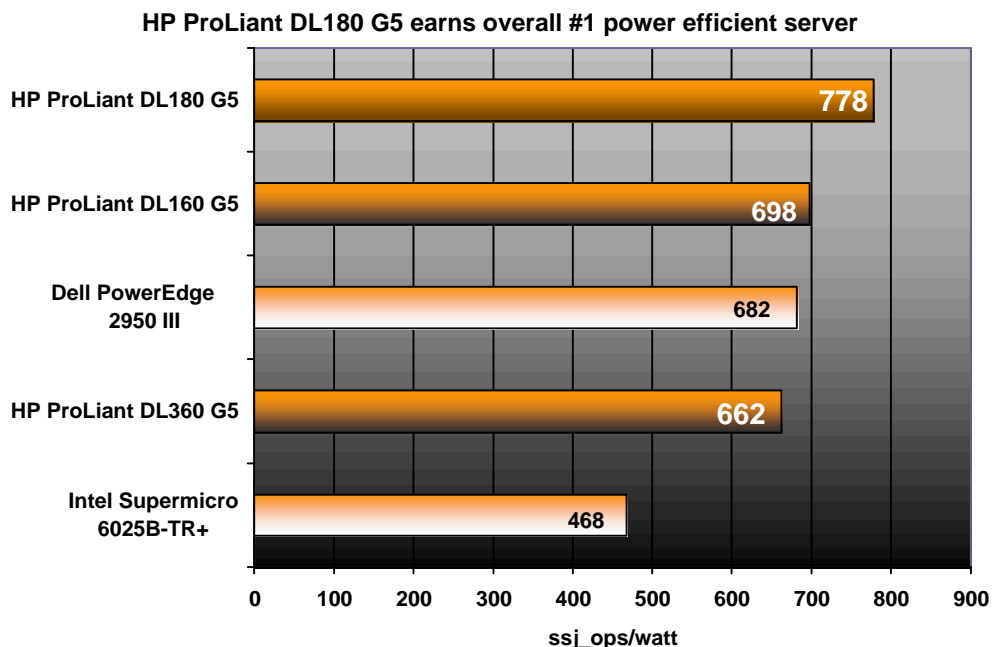
The HP DL180 G5 takes the lead for energy-efficient performance!



More information about SPECpower benchmark results for all servers can be found at the following Web page:  
[http://www.spec.org/power\\_ssj2008](http://www.spec.org/power_ssj2008).

HP takes 3 out of the top 5 leading energy-efficient servers

Figure 1. Comparison of SPECpower\_ssj™ 2008 results of the HP ProLiant DL180 G5 and ProLiant DL160 G5 two-processor Quad-Core servers vs. two-processor competitors (All results as of 1-17-08).



## ProLiant server configurations

The #1 power-efficient server, the HP ProLiant DL180 G5, was configured with the Intel Xeon E5450 3.0GHz processors with 8 cores/ 2 chips/4 cores per chip, 2x6MB L2 shared cache, 1333MHz system bus, 16GB (4x4GB) low power (LP) PC2-5300F memory, 1 x 60GB, 7.2K rpm, Small Form Factor SATA drive, and an embedded ICH-9 SATA controller.

The ProLiant DL180 G5 was running Microsoft Windows Server 2003 x64 Enterprise Edition (EE) R2 and used one 750W power supply.

## Competition Comparison

Table 1. Configuration comparison of 2-processor benchmark competitors

2-socket server	overall ssj_ops/watt	Operating System
HP ProLiant DL180 G5 Intel Xeon E5450, QC, 8/2/4,16GB RAM LP	778	Microsoft Windows Server 2003 x64 Enterprise Edition R2
HP ProLiant DL160 G5 Intel Xeon E5450, QC, 8/2/4,16GB RAM LP	698	Microsoft Windows Server 2003 x64 Enterprise Edition R2
Dell PowerEdge 2950 III, Intel Xeon E5440, QC 8/2/4, 16GB RAM	682	Microsoft Windows Server 2003 x64 Enterprise Edition SP2
HP ProLiant DL360 G5, Intel Xeon E5450, QC, 8/2/4,16GB RAM LP	662	Microsoft Windows Server 2003 x64 Enterprise Edition SP2
Intel Supermicro 6025B-TR+, Intel L5335, QC 8/2/4, 8GB RAM	468	Microsoft Windows Server 2003 x64 Enterprise Edition SP2

All results as of 01-17-08

## 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.

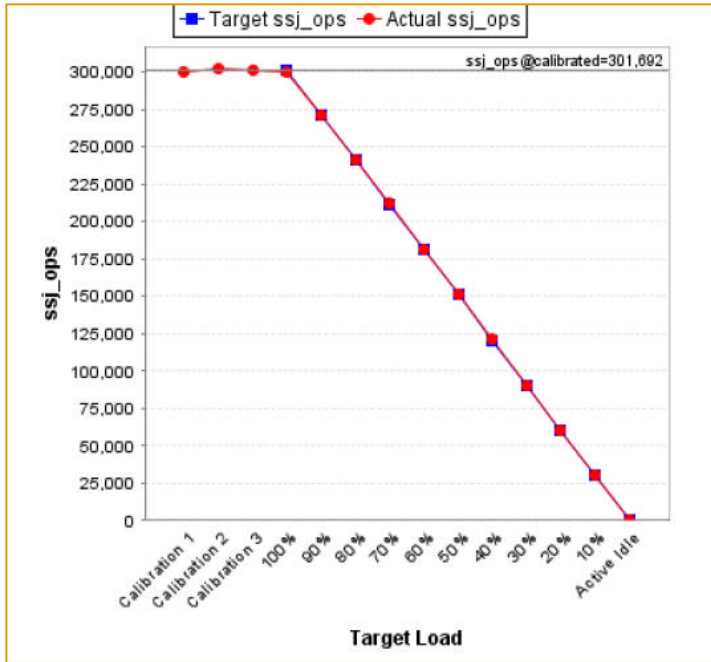
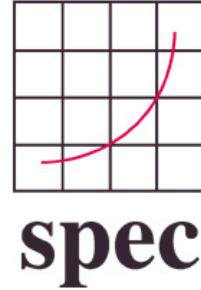


Figure 2. The SPECpower\_ssj™2008 primary metric is the “overall ssj\_ops/watt”. The HP ProLiant DL180 G5 showed a 778 overall ssj\_ops/watt ratio. This metric is computed by taking the sum of the ssj\_ops scores for all target loads, and then dividing by the sum of the power consumption averages for all target loads – including the “active idle” (0% utilization) measurement interval.



## For more information

HP ProLiant DL180 G5: [www.hp.com/servers/dl](http://www.hp.com/servers/dl)

HP ProLiant benchmarks: [www.hp.com/servers/benchmarks](http://www.hp.com/servers/benchmarks)

For more information on SPEC benchmarks: [www.spec.org](http://www.spec.org)

Overview of the SPECpower\_ssj2008 benchmark:

[ftp://ftp.compaq.com/pub/products/servers/benchmarks/specpower\\_ssj\\_overview.pdf](ftp://ftp.compaq.com/pub/products/servers/benchmarks/specpower_ssj_overview.pdf)

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