HIGH ACHIEVER: HP ProLiant DL585 sets another record
ProLiant DL585 G6 maintains 4-socket virtual performance leadership

HP Leadership

The latest HP ProLiant DL585 G6 rack server is a highly manageable, rack optimized, four-socket server designed for maximum performance in an industry standard architecture. The large 256GB footprint and nine expansion slots provide the memory and I/O scalability customers need to support multiple applications or virtual machines on a single physical server. The large memory capacity also provides an ideal platform for EDA, financial, and petrochemical applications that demand lots of memory.

With this highly scalable feature set, the ProLiant DL585 G6 is an ideal choice for the growing enterprise class database, consolidation, and virtualization environments seeking to improve server utilization and reduce server sprawl, while continuing to leverage all the familiar and easy-to-use ProLiant management tools and options.

Customer Value

What are the customer benefits of using the HP ProLiant servers for virtualization?

The HP ProLiant DL585 G6 offers up to 53.8% increase in performance, a major advantage when compared to other four-socket, 24-core competitors utilizing VMware. With the VMmark benchmark result, customers can compare performance and scalability of different virtualization platforms, make appropriate hardware choices, and monitor virtual machine performance on an ongoing basis. And they can be reassured the HP ProLiant DL585 G6 is the appropriate choice.

Key Points

- The HP ProLiant DL585, again, is the highest performing 4-socket server on the VMmark benchmark with an outstanding VMmark score of 29.95@20 tiles.
- This result defeated all 4-socket rack server competitors, including Dell, IBM, and Sun.
- The HP ProLiant DL585 also showed an increase in scalability performance of 35.4% compared to previous generation technology.

Figure 1. Vendor VMmark top four-socket results

Test results as of 07/13/09

The HP ProLiant DL585 G6 results outperformed ALL other 4-socket/24-core competitors by UP TO 53.8% WITH A SIX-TILE ADVANTAGE on the virtualization benchmark.

Technology for better business outcomes
The ProLiant advantage

**HP proven performance**

HP has posted hundreds of benchmark results on the most commonly used benchmarks on hundreds of ProLiant servers and blades, helping customer to identify reasons to be confident in HP.

Table 1. VMmark configuration for system results for four-socket 6-Core servers

<table>
<thead>
<tr>
<th>System Description</th>
<th>VMmark Version &amp; Score</th>
<th>Processors</th>
<th>Published Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Top 4-socket results</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HP ProLiant DL585 G6</strong></td>
<td>VMmark v1.1</td>
<td>29.95 @ 20 tiles</td>
<td>07/13/09</td>
</tr>
<tr>
<td>Six-Core AMD Opteron processor Model 8439 SE 2.8GHz</td>
<td>VMware ESX 4.0</td>
<td></td>
<td></td>
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<tr>
<td>128GB (16 x 8GB) RAM</td>
<td></td>
<td></td>
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<tr>
<td>4 sockets/24 total cores/24 total threads</td>
<td></td>
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<tr>
<td><strong>IBM System x3850 M2</strong></td>
<td>VMmark v1.1</td>
<td>20.50 @ 14 tiles</td>
<td>03/06/09</td>
</tr>
<tr>
<td>Six-Core Intel Xeon X7460 2.66GHz</td>
<td>VMware ESX v3.5.0 Update 3</td>
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<tr>
<td>128GB (32 x 4GB) RAM</td>
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<tr>
<td>4 sockets/24 total cores/24 total threads</td>
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<tr>
<td><strong>Dell PowerEdge R900</strong></td>
<td>VMmark v1.1</td>
<td>19.99 @ 14 tiles</td>
<td>02/10/09</td>
</tr>
<tr>
<td>Six-Core Intel Xeon X7460 2.67GHz</td>
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<td>96GB (12 x 8GB) RAM</td>
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<tr>
<td><strong>Inspur NF520D2</strong></td>
<td>VMmark v1.1</td>
<td>19.67 @ 14 tiles</td>
<td>01/27/09</td>
</tr>
<tr>
<td>Six-Core Intel Xeon X7460 2.67GHz</td>
<td>VMware ESX v3.5.0 Update 3</td>
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<tr>
<td>80GB (20 x 4GB) RAM</td>
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<td>4 sockets/24 total cores/24 total threads</td>
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<tr>
<td><strong>Sun Fire X4450</strong></td>
<td>VMmark v1.0.0</td>
<td>19.47 @ 14 tiles</td>
<td>01/13/09</td>
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<tr>
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<td>80GB (20 x 4GB) RAM</td>
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<td>4 sockets/24 total cores/24 total threads</td>
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Test results as of 07/13/09. For more details, please visit: [http://www.vmware.com/products/vmmark/results.html](http://www.vmware.com/products/vmmark/results.html)

**NEW HP ProLiant DL585 G6**

The ProLiant DL585 G6 improves on its reputation for performance with faster processors, more memory, and additional storage options to deliver more value than ever before. Combined with industry-leading management and support options, the DL585 G6 is a great choice for today’s demanding enterprise applications and virtualization projects. The ProLiant DL585 G6 now includes:

- Support for AMD’s latest Opteron 8400 series processors for improved performance, price/performance, and TCO.
- Support for 8GB PC2-6400 Registered DIMMs on select models.
- Support for the AMD Opteron 8439 SE for maximum flexibility.
HP performance scalability increases with Multi-Core technology

In addition to achieving the #1 4-socket performance result on the VMmark benchmark, the ProLiant DL585 G6 rack server showed outstanding 4-processor performance scalability results with the progression from previous generation technology.

The ProLiant DL585 G6 server demonstrated a large increase in performance when it achieved 29.95 @ 20 tiles for its Six-Core 2.8GHz result compared to its previous Quad-Core 3.1GHz result of 22.11 @ 15 tiles. Overall, the ProLiant DL585 G6 server showed a performance scalability progression of more than twice the performance going from a Quad-Core 2.5GHz result with 14.74 @ 10 tiles to the Six-Core 2.8GHz 29.95 @ 20 tiles result.

Figure 2. HP ProLiant DL585 comparison of Six-Core and Quad-Core performance scalability

Full disclosure reports for the above configurations can be found at http://www.vmware.com/products/vmmark/results.html

What is the VMmark Benchmark?

VMmark is the first benchmark that was designed specifically to quantify and measure the performance of virtualized environments. It features a novel tile-based scheme for measuring the scalability of consolidated workloads and provides a consistent methodology that captures both the overall scalability and individual application performance.

Partnership between HP and VMware

More than a dozen ProLiant servers are certified for VMware. HP can help your business plan, implement, and operate a virtual infrastructure with VMware. HP qualifies a wide range of ProLiant servers, StorageWorks storage, and integrated HP management software. HP offers more VMware certified servers than any other OEM, and we have a full array of ProLiant servers certified for VMware ESX and VMware ESX Server 3i.

HP partners closely with VMware to engineer and offer innovative technologies, so you can virtualize with confidence. Only HP gives customers an end-to-end virtualization solution that encompasses all aspects of your environment—from virtualization of mission-critical platforms, to client infrastructure, to management of your virtualized data center. These offerings include industry-leading virtualization software from VMware, combined with HP infrastructure and tools for unified management of the virtual environment. Read more about HP Virtualization with VMware in our Solutions Guide.

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1 Same cross-generational count used for competitor platforms. For the most up to date list, visit: www.hp.com/go/vmware and http://www.vmware.com/pdf/vi3_systems_guide.pdf.
For more information
For more information on HP ProLiant benchmarks:
For more information on VMware for HP ProLiant servers:
HP VMware information:
Home page for VMware's VMmark:
VMmark FAQ:
VMmark Guide:
Full Disclosure Reports for the HP ProLiant DL585 G6 and the other core results posted as of date of publication:

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