Another world record for the HP ProLiant DL380 G7

ProLiant rack server enjoys continual performance TPC-E success

May 2010

Executive summary
The ProLiant DL380, with the latest Generation 7 technology, defeated all two-socket competitors with its 1110.11 tpsE @ $294 USD/tpsE performance result on the TPC-E benchmark. This #1 performance result was also achieved at a lesser cost than its two-socket competitors.

Key Take Aways:
- #1 OVERALL two-socket performance
- Defeats IBM, Dell, and Fujitsu two-socket competitors by up to 44.8% more performance and at a lesser cost

What this means for customers
Clients want less complexity and more efficiency in their IT operations and across their network infrastructure. HP is the only company that can deliver a single common, modular architecture across the data center from x86 to Superdome. HP is at an inflection point where our technology is coming together to help our clients build the data center of the future, and it will be based on a Converged Infrastructure. Companies can use the same architecture to run and manage multiple workloads across servers, storage, and networking. This significantly reduces complexity, resource requirements, and costs.

Business transformation:
The TPC Benchmark™ E is composed of a set of transactional operations designed to exercise system functionalities in a manner representative of complex OLTP application environments. Running this benchmark on the HP ProLiant DL380 G7 formulates a winning performance outcome. HP is the only company to offer a full portfolio of standards-based, integrated solutions, and services developed specifically to solve the complexities of the data center.

Why the ProLiant DL380 is the world’s best-selling rack server
The HP ProLiant DL380 G7 is the world’s best-selling rack server, continuing its dominant share in the 2U, 2-socket market with new G7 benefits. Its rack server format delivers on its heritage of engineering excellence with increased flexibility and performance, enterprise-class uptime and manageability, 2-socket Intel Xeon performance, and 2U density for a variety of applications.

Other key benefits include:
- 6-core /4-core Intel Xeon Performance for demanding scale-out applications and virtualization projects
- Flexible, ready to deploy for complex, dynamic environments
- Powerful administration management tools
- Versatility and availability for a wide range of deployments
- Increased performance, durability, and energy efficiency
Figure 1: The ProLiant DL380 G7 is the #1 two-socket server by up to 44.8% greater performance.

Table 1. The ProLiant DL380 G7 two-socket server has greater performance than IBM, Fujitsu, and Dell

<table>
<thead>
<tr>
<th>Sponsor</th>
<th>System: Proc./Cores/Threads</th>
<th>tpsE</th>
<th>USD$/tps</th>
<th>System Availability</th>
<th>OS/Database</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HP</strong></td>
<td>HP ProLiant DL380 G7 Intel Xeon X5680 3.3GHz 2/12/24</td>
<td>1110.11</td>
<td>$294.00</td>
<td>05/11/10</td>
<td>MS Windows Server 2008 R2 Ent. Ed. MS SQL Server 2005 R2 Ent. Ed.</td>
</tr>
<tr>
<td><strong>IBM</strong></td>
<td>IBM System x3650 M2 Quad-Core Intel Xeon x5570, 2.93GHz (2 processors/8 cores/16 threads)</td>
<td>817.15</td>
<td>$319.15</td>
<td>07/31/09</td>
<td>Microsoft SQL Server 2008 Ent. x64 Ed. Microsoft Windows Server 2008 Ent. Ed. (x64) SP1</td>
</tr>
<tr>
<td><strong>FUJITSU</strong></td>
<td>Fujitsu PRIMERGY RX300 S5 Quad-Core Intel Xeon x5570, 2.93GHz (2 processors/8 cores/16 threads)</td>
<td>800.0</td>
<td>$343.91</td>
<td>04/01/09</td>
<td>Microsoft SQL Server 2008 Ent. x64 Ed. Microsoft Windows Server 2008 Ent. Ed. (x64)</td>
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<tr>
<td><strong>DELL</strong></td>
<td>Dell PowerEdge T610 Quad-Core Intel Xeon x5570, 2.93GHz (2 processors/8 cores/16 threads)</td>
<td>766.47</td>
<td>$306.55</td>
<td>03/30/09</td>
<td>Microsoft SQL Server 2008 Ent. x64 Ed. Microsoft Windows Server 2008 Ent. Ed. (x64)</td>
</tr>
</tbody>
</table>

Benchmark Configurations

The HP ProLiant DL380 G7 was set up as a 2-processor system with two 3.3GHz 6-Core Intel Xeon X5680 Processors (2 processors/12 cores/24 threads), with 12MB L3 cache, and 192GB main memory (12 x 16GB) PC3-8500R DIMMs. The server was also configured with 4 x LSI9200_8e SAS controllers connected to 8 x StorageWorks D2700 with 16 x 120GB Solid State Drives each and one Smart Array P411 Controller connected to 3 x StorageWorks D2700 Enclosures with 56 x 500GB 7.2K SFF SAS external drives. The server was running Windows Server 2008 R2 Enterprise Edition operating system, SQL Server 2008 R2 Enterprise Edition database. System availability date is 05/11/10.
Bottom Line
Now, HP customers can identify systems that meet their performance requirements. This TPC-E #1 result shows the HP ProLiant DL380 G7 can deliver more durability for customers’ needs with increased performance for demanding scale-out applications.

About the TPC-E benchmark
What TPC-E measures

TPC Benchmark™ E (TPC-E) is a new On-Line Transaction Processing (OLTP) workload developed by the TPC. The TPC-E benchmark simulates the OLTP workload of a brokerage firm. The focus of the benchmark is the central database that executes transactions related to the firm’s customer accounts. Although the underlying business model of TPC-E is a brokerage firm, the database schema, data population, transactions, and implementation rules have been designed to be broadly representative of modern OLTP systems. For more details, see http://www.tpc.org/tpce/spec/TPCEDetailed.doc.

TPC Disclosure
A full disclosure report describing these benchmark results has been filed with the Transaction Processing Performance Council (TPC) and is available upon request. This report describes the benchmark HW and SW configuration in detail, provides costs, and lists the code actually used to perform the test. Similar reports from other vendors are the source of the price/performance comparisons provided above. Summaries of all tests are published each month by the TPC and on the Internet on the TPC’s World Wide Web Server. With these benchmarks, customers can objectively compare the performance of different vendors’ servers in specific areas. Results as of May 11, 2010.

For more information check out:
HP ProLiant DL380 G7: www.hp.com/servers/proliantdl380g7
TPC-E details: http://www.tpc.org