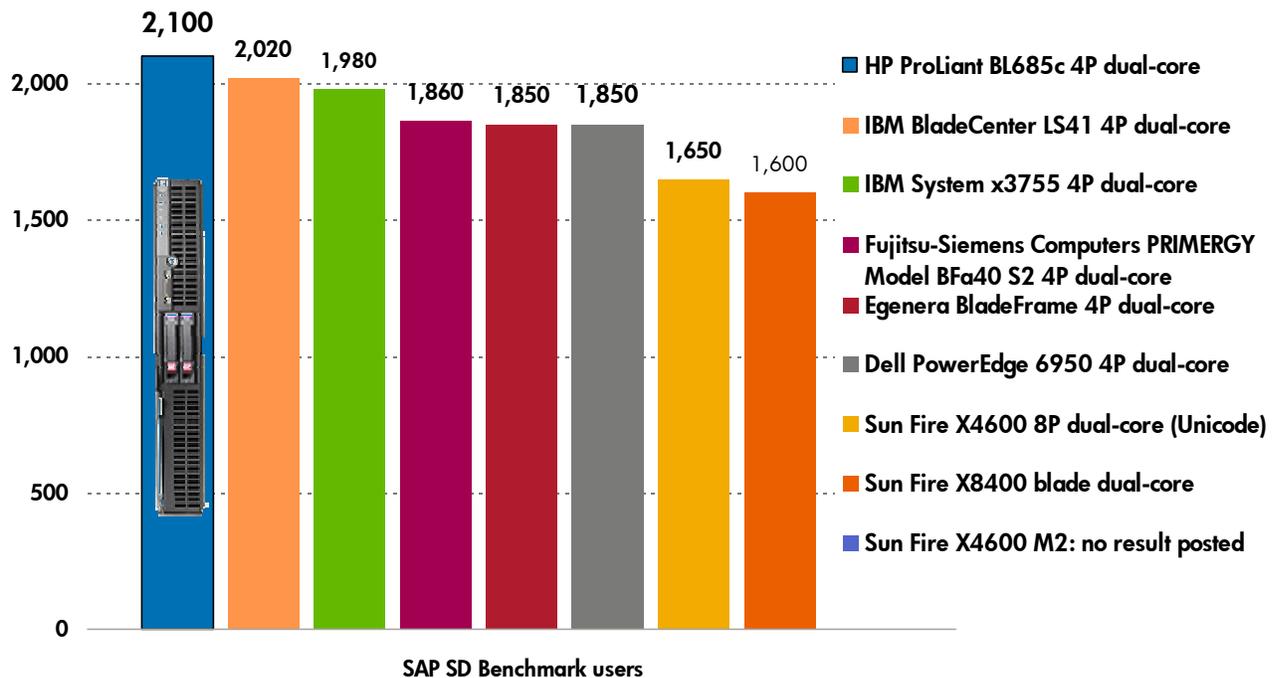


HP ProLiant BL685c with four AMD Opteron™ 8222 processors delivers excellent results on the two-tier SAP® Sales and Distribution (SD) Standard Application Benchmark



HP ProLiant BL685c and other results on two-tier SAP SD Benchmark



More information about all servers can be found at the following Web page: <http://www.sap.com/benchmark>. Results as of 09/03/07. Configurations and detailed results on last page.

ProLiant BL685c configuration

Tests were performed on the ProLiant BL685c server blade by HP's Houston Solution Alliances SAP Engineering lab in Houston, TX. HP received certification from SAP AG of the results on the two-tier SAP® Sales and Distribution (SD) Standard Application Benchmark for the ProLiant BL685c (#2007053) on September 3, 2007. The server was configured as a four-processor system with 4 x 3.0GHz Dual-Core AMD Opteron Processor Model 8222 (4 processors/8 cores/8 threads), with 128 KB L1 cache per core and 1MB L2 cache per core, and 32GB main memory. The server was running Microsoft Windows Server 2003 Enterprise Edition operating system, Microsoft SQL Server 2005 database, and the SAP ERP 6.0 application (formerly known as mySAP™ ERP 2005 application).

Results: The ProLiant BL685c achieved 2,100 SAP SD Benchmark users, equivalent to a throughput of 210,670 fully processed order line items per hour or 10,530 SAPS.

HP servers and storage behind the results

HP ProLiant BL685c

Designed to keep pace with strenuous computing demands, the HP ProLiant BL685c server blade is equipped with outstanding 4P processing power and expansion capabilities, enterprise-class availability features, and industry-leading management tools that make it easy to deploy and maintain.

HP Small Form Factor (SFF) SAS drives



The transition to SFF SAS drives has been one of the most significant transitions in the industry's history, fueled by the biggest required leap in storage capacity ever experienced along with the need for faster access to stored data. Many server vendors forced customers to undergo two transitions, first to 3.5" SAS and finally to 2.5" – ***HP lead this industry change, providing one transition – directly to SFF for the ultimate in SAS performance and the best investment protection.*** HP small form-factor SAS drives offer 3Gb/sec throughput, nearly 10x the throughput of Ultra320 SCSI solutions with superior price/performance, making HP SAS the clear choice for high performance DSS database applications.

HP Smart Array Controller E200i



The HP Smart Array E200i is HP's first entry level PCI Express (PCIe) Serial Attached SCSI (SAS) RAID controller. The full-size card has 8 ports and utilizes DDR1-266 memory. The E200 is ideal for RAID 0/1 and can be upgraded with the 128MB battery-backed write cache (BBWC) module for RAID 5.

QLogic-based Fibre Channel Mezzanine HBA



The QLogic-based Fibre Channel Mezzanine HBA for HP p-Class BladeSystem uses the proven QLogic ISP2312 Fibre Channel ASIC. QLogic has successfully packaged a pair of 2Gb Fibre Channel HBAs into a single reliable ASIC including dual RISC processors, dual frame buffers and dual Fibre Channel interfaces with a single PCI interface. The QLogic-based Fibre Channel Mezzanine HBA was connected to the 14 external drives in the MSA1000 for this benchmark.

HP Modular Storage Array 1000



The MSA1000 is the premiere storage system in the HP StorageWorks Modular Smart Array family, delivering industry-leading technology to meet today's demanding and growing storage needs. The performance and scalability of the MSA1000 allows for up to 18 additional ProLiant servers to be connected.

SAP and HP Partnership

HP has been partnering with SAP AG for over 20 years. Together, we've created a remarkable legacy providing world-class business solutions to global clients. Our offer is a unique combination of open, flexible technologies and broad expertise. That's why nearly half of the worldwide implementations of SAP applications run on HP infrastructure.

- HP servers host almost 50% of all SAP solution-based installations with more than 55,000+ installations and more than 20,000 customers.
- HP is the global disk storage market leader with 23.6% market share with a No.1 position in Storage Area Networks.
- HP is the leading provider of imaging and printing solutions for SAP applications.
- We integrate, certify, and optimize new solutions by:
 - Six SAP Solutions Centers located in Atlanta & Houston, USA; and in Asia in Singapore, India, China, and Korea.
 - One SAP Competency Center, Walldorf, Germany.
- 24x7 support through globally connected SAP support centers in more than 15 countries worldwide.
- HP is one of the largest SAP customers in the world. HP uses SAP solutions for Enterprise Resource Planning and Supply Chain Management.
- HP's output management technology is a proven and recommended platform for output management in the context of SAP solutions.
- HP has been awarded SAP's highest level of partnership in 3 out of 4 key areas.¹

For more information

HP ProLiant BL685c: www.hp.com/servers/bl685

Configuration details

IBM AMD Opteron LS41 for IBM BladeCenter results on the two-tier SAP SD Standard Application Benchmark. The IBM AMD Opteron LS41 for BladeCenter (Certification #2007018) was configured as a four-processor server (4 processors/8 cores/8 threads) with Dual-Core AMD Opteron Processor Model 8220SE 2.8 GHz, 128 KB L1 cache and 1 MB L2 cache per core, and 32 GB main memory. The IBM LS41 was running SAP ERP 2005 with Microsoft Windows Server 2003 Enterprise Edition and DB2 9 database and achieved 2,020 SAP SD Benchmark users, equivalent to a throughput of 202,330 fully processed order line items per hour or 10,120 SAPS.

IBM System x3755 results on the two-tier SAP SD Standard Application Benchmark. The IBM System x3755 (Certification #2006088) was configured as a four-processor server (4 processors/8 cores/8 threads) with Dual-Core AMD Opteron Processor Model 8220SE 2.8GHz with 128KB L1 cache and 1MB L2 cache per core, and 32 GB main memory. The IBM x3755 was running mySAP ERP 2005 with Microsoft Windows Server 2003 Enterprise Edition and DB2 UDB 9 database and achieved 1,980 SAP SD Benchmark users, equivalent to a throughput of 198,330 fully processed order line items per hour or 9,920 SAPS.

Fujitsu-Siemens Computers PRIMERGY Model BFa40 S2 results on the two-tier SAP SD Standard Application Benchmark. The Fujitsu Siemens Computers PRIMERGY Model BFa40 S2 (Certification #2007043) was configured as a four-processor server (4 processors/8 cores/8 threads) with AMD Opteron Processor Model 8220SE 2.8 GHz, 128 KB L1 cache and 1 MB L2 cache per core, and 32 GB main memory. The Fujitsu BFa40 S2 was running SAP ERP 6.0 with Microsoft Windows Server 2003 Enterprise Edition operating system and SQL Server 2005 database and achieved 1,860 SAP SD Benchmark users, equivalent to a throughput of 187,330 fully processed order line items per hour or 9,370 SAPS.

Egenera BladeFrame Model PB60007R results on the two-tier SAP SD Standard Application Benchmark. The Egenera BladeFrame Model PB60007R (Certification #2007043) was configured as a four-processor server (4 processors/8 cores/8 threads) with AMD Opteron processors Model 8220SE 2.8GHz with 128 KB L1 cache and 1 MB L2 cache per core and 32 GB main memory. The Egenera BladeFrame PB60007R was running SAP ERP 6.0 with Microsoft Windows Server 2003 Enterprise Edition operating system and SQL Server 2005 database and achieved 1,860 SAP SD Benchmark users, equivalent to a throughput of 187,330 fully processed order line items per hour or 9,370 SAPS.

¹ <http://h71028.www7.hp.com/enterprise/cache/13419-0-0-121.html>

Dell PowerEdge 6950 results on the two-tier SAP SD Standard Application Benchmark. The Dell PowerEdge 6950 (Certification #2007025) was configured as a four-processor server (4 processors/8 cores/8 threads) with Dual-Core AMD Opteron Processor Model 8220SE 2.8 GHz, 128 KB L1 cache and 1 MB L2 cache per core, and 64 GB main memory. The Dell PowerEdge 6950 was running SAP ERP 2005 with Microsoft Windows Server 2003 Enterprise Edition operating system and SQL Server 2005 database and achieved 1,850 SAP SD Benchmark users, equivalent to a throughput of 186,670 fully processed order line items per hour or 9,330 SAPS.

Sun Blade X8400 results on the two-tier SAP SD Standard Application Benchmark. The Sun Blade X8400 (Certification #2006059) was configured as a four-processor server (4 processors/8 cores/8 threads) with Dual-Core AMD Opteron Processor Model 885 2.6GHz processors with 128KB L1 and 1 MB L2 cache per core, and 32 GB main memory. The Sun Blade X8400 was running mySAP ERP 2004 (64-bit) with Microsoft Windows Server 2003 Enterprise Edition (64-bit) operating system and Microsoft SQL Server 2005 (64-bit) database and achieved 1,700 SAP SD Benchmark users, equivalent to a throughput of 170,330 fully processed order line items per hour or 8,520 SAPS.

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