IBM posts leadership results on the SAP Transaction Banking standard application benchmark

IBM System x and DB2 process more than 56 million account transactions per hour—a new world record result for transaction banking on the SAP Transaction Banking benchmark

September 13, 2011 ... IBM® today announced the first clustered database result published for the SAP® Transaction Banking (TRBK) standard application benchmark. The system processed more than 56 million posting transactions per hour and more than 22 million balanced accounts per hour, at the same time supporting demanding banking industry system availability requirements. This result sets a new record for the highest number of account transactions processed per hour on the SAP TRBK standard application benchmark. (1)

The results were achieved using the IBM System x3690 X5 with IBM DB2® 9.7 with DB2 pureScale®, SUSE Linux® Enterprise Server and the SAP enhancement package 1 for the SAP NetWeaver® 7.1 technology platform. DB2 pureScale provides continuous availability using highly reliable clustering technology on IBM systems and a redundant architecture.

The SAP Transaction Banking benchmark is divided into two business scenarios:
- Day processing: The posting of transactions (e.g., users moving money into and out of accounts) that generally occurs during the daytime
- Night processing: The balancing of accounts that generally occurs overnight in batch mode

The benchmark scenario contained 90,000,000 accounts and 1,800,000,000 postings with these results:
- Day processing: Number of postings to bank accounts per hour was 56,518,000, at 89% CPU utilization for the database servers and 62% CPU utilization for the application servers
- Night processing: Number of balanced accounts per hour was 22,382,000 at 36% CPU utilization for the database servers and 47% CPU utilization for the application servers

The cluster contained five x3690 X5 database servers, each configured with two Intel® Xeon® E7-2870 processors at 2.40GHz with 30MB shared L3 cache per processor (2 processors/20 cores/40 threads), 256GB of memory, IBM DB2 9.7 ESE with pureScale feature, SUSE Linux Enterprise Server 11 SP1, and the SAP Deposits Management application (Banking Services Release 7.0). The clustered servers accessed the DB2 database on the storage on an IBM System Storage® DS8800 disk system. The servers were configured to take over workload in case of a single system failure, thereby supporting high application availability.

Twenty-one IBM BladeCenter® HS22 application servers for Dialog/Batch/Message/Enque processing each contained two Intel Xeon X5570 processors at 2.93GHz with 8MB shared L3 cache per processor (2 processors/8 cores/16 threads), and 48GB of memory.

Designed for mission-critical workloads such as online transaction processing (OLTP), IBM's industry-leading clustering technology is now available on System x® servers. IBM first introduced this technology on the System z® platform, and later on System p®. Now, DB2 on System x leverages the outstanding business benefits of IBM X-Architecture® and, with SUSE Linux Enterprise Server, provides a cost-effective, open, reliable and secure IT environment that can easily scale as workloads demand.

Results referenced are current as of September 13, 2011. For the latest SAP benchmark results, visit: http://www.sap.com/benchmark.

(1) This benchmark fully complies with the SAP Benchmark Council regulations and has been audited and certified by SAP AG (certification number 2011035). Details can be obtained from IBM and SAP. The benchmark was performed at IBM in Montpellier, France, by IBM engineers.