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Databases and T2000

There seems to be a little misunderstanding in the marketplace. T2000 is the best Application- and Webserver. End of Story. Really ? Well, not really. We've made some interesting benchmarks based on the iGen OLTP Benchmark that perpetuates the story of T2000. For the people unaware of iGen OLTP-Benchmark :

The iGEN-OLTP 1.5 benchmark is a SUN internally developed transaction processing database workload. This workload simulates a light-weight Global Order System that stresses lock management and connectivity. This benchmark is easily portable on any database that support the ANSI v2 standard.

The database has 1.25 million customers residing in it, and is approximately 6 GB in size. The transactions are comprised of various SQL transactions: read-only selects, joins and insert operations.

The transaction mix for iGen in this test are 39% heavy-weight, 43% medium-weight, and 17% light-weight queries).

Three machines were compared in this benchmark:

Sun Fire T2000 (8 cores, 1 chip, 1.2 GHz US T1) Solaris 10, Oracle 10gR2

Dell 6850 (4 cores, 4 chips, 3.12GHz Xeon EM64T) SuSE9, Oracle 10gR2

Dell 6650 (4 cores, 4 chips, 3.0GHz Xeon MP) RH4, Oracle 10gR2

The Dell systems are reasonable choices for a database Servers: Same storage. Same amount of memory on all systems.

The result:

Sun Fire T2000 - peak users 5750, 162,080 tpmM

Dell 6850 peak users 1300, 44,490 tpmM

Dell 6650 peak users 2450, 60,730 tpmM

Wow ... okay....

• The Sun Fire T2000 server beats the 4-way Dell PowerEdge 6850/Linux and 4-way Dell PowerEdge 6650/Linux configurations in head-to-head on Oracle OLTP database performance.

• The Sun Fire T2000 server is 3.7x faster than a Dell PowerEdge 6850 with four 3.12GHz Xeon EM64T processors.

• The Sun Fire T2000 server is 2.7x faster than the Dell PowerEdge 6650 with four 3GHz Xeon 32-bit processors with 3 MB L3 cache.

• The Sun Fire T2000 server is able to operate efficiently at very high loads and is very stable showing over 6,000 user connections using Oracle 10gR2. In contrast, the Dell Systems could only support 2,500 user connections and exhibited instability.

• Not only is the Dell PowerEdge 6850 3.7x slower than the Sun Fire T2000 it also requires 1.6x more power at 510 watts. (Dell PowerEdge 6850 has four 3.12 GHz Xeon EM64T).

To this one i want to add my personal experience:

•The Oracle/Linux solution is often costly and complex to setup and maintain due to hidden or unclear compatibility and version dependencies.

Imagine you have an Quad-Opteron rig from Sun, a big storage array from a well known manufacturer and Oracle. Oracle supports certain distributions with certain linux kernels, the opteron rig supports certain distributions with certain linux kernels and the multipathing drivers for the storage array supports certain distributions with certain linuxkernels. Only one thing is missing ... the intersection. And now tell me that it's easy to run professional computing on linux. This stuff can drive you crazy. And "okay, it's not supported, but it will run" doesn't count ... not for central systems in an enterprise.

Posted by Joerg Moellenkamp in English, Oracle at 12:56