Solid-state drive sets speed record

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Engineers and researchers at the IBM Hursley development lab in England and Almaden Research Center in California have set a record in storage speed, outperforming the current rate by more than 250 percent. By combining Flash solid-state technology and IBM's storage virtualization technology, the researchers were able to transfer data at more than 1 million Input/Output (I/O) per second.

The results have profound implications, especially for businesses that rely on computational speed such as reservation systems and financial trading systems. Solid state storage is faster than traditional disk drives because it uses no moving parts. It also requires less floor space and energy. But experts say achieving gains will need more than new hardware.

The results were achieved using Flash solid-state technology coupled with IBM's industry leading, highly scalable storage virtualization technology. Under the codename "Project Quicksilver," IBM achieved groundbreaking results in transferring data at a sustained rate of over one million Input/Output (I/O) per second -- with a response time of under one millisecond (ms). Compared to the fastest industry benchmarked disk system Quicksilver improved performance by 250 percent at less than 1/20th the response time, took up 1/5th the floor space and required only 55 percent of the power and cooling.

Performance improvements of this magnitude can have profound implications for business, allowing 2-3 times the work to complete in a given timeframe for classic workloads, enabling tremendous efficiency

for time sensitive applications like reservations systems, and financial program trading systems, and creating opportunity for entirely new insights in information warehouses and analytic solutions.

Details of the SAN Volume Controller SPC-1 Results are available at: www.storageperformance.org/res … _results_spc1#a00052 When compared with the IBM System Storage SAN Volume Controller using traditional disk storage devices.

Provided by IBM