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# Computing System Performance Bottlenecks for IOs and DTS Solution

Over the last few decades, performance of processor has been increasing by 50% / year while disk access time of storage system has been merely increasing 9%/year. Besides this, capacity of the hard disk has been increasing about 60% /year, indicating that storage system IO (Input Output) has to handle ever increasing amount of data. Whereas OS level virtualization also requires high IOs to achieve the desired performance. There have been a number of efforts to improve IOs performance however the gap between storage IO performance and CPU is amplified by constant improvement in CPU technology. DTS Inc proposes hybrid HDD having built in cache with an intelligent caching algorithm to manage bulk data efficiently to improve IOs performance of storage systems. This drive called platinum HDD, significantly improves IOs of the order of 10 to 100 times faster than the conventional HDD, and improves energy usage by minimizing access to electro-mechanical drives.

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