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Toshiba Launches new storage system “Toshiba Total Storage Platform” to meet big data and cloud solutions

Toshiba’s innovative storage tiering technology levels ultrafast flash memory to large capacity of HDD at the same time

Toshiba Asia Pacific Pte. Ltd. today announced that it will start selling new storage system “Toshiba Total Storage Platform (TTSP)” to the South East Asia market. TTSP is a series of four storage products that brings together Toshiba Group’s wide experience in storage technologies, to meet the diverse needs of big data, cloud society, and enterprise necessities. . The TTSP will be showcased at the Cloud Expo 2013, which is held at November 13th and 14th at Suntec Exhibition Centre, Singapore.

Today, dramatic increase of data volume for IT system, such as big data analysis, requires high speed I/O for large data. At the same time, Cloud Service Providers require storage system with smaller footprint with cost efficiency.

Toshiba’s diversified layer of four products can provide optimized portfolio to meet these requests. The strength of the group comes from Device technologies portfolio which includes NAND flash memory, which Toshiba invented, to SSD and HDD which adds choices of flexibility in devices itself of speed, durability, and capacity. Toshiba’s strength brought together not only underlies in devices, but also has capabilities of storage system technologies such as drive control, RAID, storage OS, and up to solution technologies such as virtualization and backup which is essential.

Toshiba’s new product line-up is as following;

- v FL 6000: Flash array storage meets the needs for fast data reading, with saving space and energy .
- v SC 3000: Highly reliable with the optimal balance of performance and capacity.
- v NL 3000: Near-line storage optimized for large capacity.
- v TC 3000: Tiered storage controller to boost fast performance and high capacity at the sametime.

Among the extensive line-up, the highlight is the storage controller "TC3000" which realizes auto-tiering among the different layers such as flash array storage "FL6000", disk array storage "SC3000"and the near-line storage "NL3000" – by combining a hybrid configuration among these

storage layers. This enables the system to meet enhanced requirements such as “expand capacity with near-line storage while taking advantage of high speed flash array” or “improve performance for existing HDD storage with high speed flash array”. This will allow customers to design a storage system to responsive flexibly to changes of requirement for capacity and performance.

Toshiba’s originally developed “tiering optimizer” on “TC3000” is the essential technology to maximize the flash storage performance, and provide optimum balance of performance and capacity of the storage without tuning. The tiering of near-line storage and flash array can be executed in 1-million IOPS with 2.6PB maximum capacity (equivalent to approximately 5,000 units of conventional HDD). Another unique volume management technology "hybrid manager" enables flash memory use rate to be changed dynamically even in operation for taking full advantage.

In the move to realize a smart community by providing cloud solution, Toshiba Corporation established new in-house company Cloud & Solutions Company in October 2013 which focuses on providing cloud service and integrated storage system.

To enhance its sales South East Asia market, Toshiba initially plans to set up its sales scheme for TTSP with sales partner in Singapore, where market is expected. Toshiba Asia Pacific already has such data solutions line up as Modular Data Center, too, and the TTSP will add another solution for the growing demand. Toshiba continues to contribute to providing flexible solutions for the support the big data society.

Product Features

- Flash array storage FL6000
 - Executes 1-million IOPS equivalent to approximately 5,000 conventional HDD
 - Enhanced reliability by the redundancy of main components includes controller, power supply, and fan

- Disk array storage SC3000
 - A primary storage based on reliable disk technology (HDD patrol, preventive maintenance, bad spot management, etc.)
 - Remote replication (synchronism /non- synchronism) and local replication is supported

- Near-line storage NL3000
 - Maximizes cost-performance with high-density implementation and de-duplication. Ideal for backup and archive

- Be able to store data 20 times more capacity provided by HDD with de-duplication

■ Tiered storage controller TC3000

- Unique tiering technology enables maximum performance of flash array and the storage devices having different performance can be handled just as one disk array
- 1-million IOPS (with FL6000) and 2.6PB maximum capacity (with NL3000)
- Optimal cost by tiering
- Manages HDD and flash memory as one virtual volume. Be able to upgrade product or replace part without stopping during operation, enhanced maintainability and operation of the system

Note:

*1 Comparison with the HDD having same performance

*2 IOPS = Input Output Per Second

*3 In the case of connecting 4 expansion units (5U/84HDD) to the basic unit (2U/12HDD)

*4 In the case of connecting 7 expansion units (5U/84HDD) to the basic unit (2U/12HDD)



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