



Hitachi enhances the TagmaStore Universal Storage Platform

Carl Greiner

May 2006





Hitachi enhances the TagmaStore Universal Storage Platform

Hitachi Data Systems has increased the performance of its flagship TagmaStore Universal Storage Platform (USP) by a reported 25%, extending the controller's capability to 2.5 million IOPS (input-output operations per second). The performance improvement is achieved primarily through a no-charge microcode update that optimises the amount of parallel processing of the I/O across the multiple back-end microprocessors. The enhancement is available to the over 3,000 USPs installed, as well as all new shipments. However, full performance will require that installed controllers utilise new 4GB ports. This performance increase, in conjunction with additional announced incremental extensions/enhancements, further extends Hitachi's unique leadership in enterprise-class heterogeneous storage controller-based virtualisation and functionality.

Announcement highlights

In addition to the USP performance enhancements, Hitachi announced software improvements to the Hitachi Universal Replicator (HUR) that allow the use of a new delta resync function in asynchronous mode, including a three data centre recovery environment. Such three-site environments incorporate two synchronous data centres (production and 'hot' stand buy) and one out-of-region (greater than 100 miles) asynchronous data centre, and represent the highest availability solution for an enterprise by providing zero or near-zero disruption protection (recovery time and recovery point objectives approaching zero). HUR now utilises delta journal updates to the remote site, greatly improving timeliness and data accuracy. Prior implementations required that the whole journal volume be transmitted. In addition, HUR has extended its mainframe capability by supporting up to four consistency groups per controller times four controllers, with potentially all 16 consistency groups kept in sync with each other and centrally managed with Hitachi Business Continuity Software.

Hitachi ShadowImage In-System Replicator (supports data replication within a Hitachi system) was enhanced to accommodate more data volumes at increased performance. The product increased the number of concurrent replication operations from 32 to 128, and doubled the number of volumes in a single consistency group to 4,096, while pushing replication performance from 350Mbit/s to over 1Gbit/s.

Other USP enhancements included:

- expanded multi-protocol capability with the inclusion of a new iSCSI blade (also announced for the NSC55)
- new 4Gbit/s fibre channel front-end blade supporting over 350Mbit/s (was 250Mbit/s)



- increase in the number of mainframe logical devices (LDEVs) from 16,000 to 64,000 per USP
- improved data security with an audit log file that maintains a history of all interactions in the USP service processor (also on the NSC55). The history includes time/date, user ID, operation performed, operation/parameters and end result (completion or error code) all for use in problem determination and/or security audits.

Analysis

Hitachi continues to incrementally enhance its industry-leading storage controller-based virtualisation capability by expanding functionality, performance, and perhaps most importantly, driving storage solutions to be more heterogeneous and cost effective. While the performance enhancement to the USP was showcased in this announcement, we have had no reported performance issues with installed USPs and, to date, all data centres report that they have yet to fully push the platform (including a few fully configured USPs). We believe that the continuing incremental enhancements (proof points) for the USP are the true 'take away' within the announcement and feel that the multi-system log facility will, over time, be extended and utilised to drive greater security, accountability and proactive management of Hitachi solutions.



Client re-use disclaimer

- This is a verbatim reproduction of independent material that has previously been published by Ovum within the last 6 months
- Ovum operates under an Independence Charter. For full details please see www.ovum.com/about/charter.asp
- Ovum may have been paid by the client for the right to re-use the material
- Ovum may have a deal with the client to supply research or consultancy. However, no other relationship exists between the 2 companies (e.g. shareholdings, loans, non-executive directorships etc)
- Ovum does not endorse companies or their products
- While we take every care to ensure the accuracy of the information contained in this material, the facts estimates and opinions stated are based on information and sources which, while we believe them to be reliable, are not guaranteed. In particular, it should not be relied upon as the sole source of reference in relation to the subject matter. No liability can be accepted by Ovum Limited, its directors or employees for any loss occasioned to any person or entity acting or failing to act as a result of anything contained in or omitted from the content of this material, or our conclusions as stated
- This material is the copyright of Ovum Ltd.