



# HP Simplifies Next-generation Storage

Industry-first storage and server convergence lowers TCO for deduplication and virtualization

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## Overview

IT administrators continue to struggle with managing data growth, streamlining operations and eliminating technology silos, which are costly as well as difficult to manage. They need an infrastructure that delivers efficiency and simplicity of operations while eliminating duplicate data that wastes storage capacity.

New storage solutions from HP that address these issues are the [HP StoreOnce D2D4324 Backup System](#) and the [HP P4800 SAN Solution](#) with [SAN/IQ 9.0 Software](#). Based on HP [HP Converged Infrastructure](#), the solutions combine server, storage and networking intellectual property to provide the ideal foundation for an instant-on enterprise that enables clients to shift resources from operations to innovation.

## Efficient data deduplication and recovery

As the rate of data growth increases, and data is distributed across more remote devices, backup and recovery operations become increasingly complex and resource intensive. Featuring [StoreOnce](#) deduplication technology, the new [HP D2D4324 Backup System](#) accelerates backup and enables data center as well as remote office data protection while reducing capacity requirements by up to 95 percent.<sup>(1)</sup> Developed by [HP Labs](#), the solution features “variable 4k chunking” and “sparse indexing” innovations, enabling HP StoreOnce to achieve higher deduplication ratios and faster recovery. HP StoreOnce D2D4324 offers clients:

- Rapid deployment with 67 percent fewer steps than competing products, demonstrated by independent third-party testing.<sup>(2)</sup>
- Protect up to 1.4 petabytes of data for 33 percent less than the competition.<sup>(1)</sup>
- Improved backup and recovery speeds with a 66 percent performance improvement as well as twice the capacity compared to the previous

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generation.<sup>(3)</sup>

### Highly integrated virtual infrastructure

The HP P4800 SAN Solution is the industry's first storage area network to be converged with the [HP BladeSystem](#). It is powered by HP P4000 SAN/iQ 9.0 software and can be managed with the enhanced [HP Insight Control plug-in for VMware vCenter](#). This all-inclusive solution delivers powerful enterprise storage capabilities including VMware VAAI integration to:

- Cloning offload to the array, which delivers 85 percent faster performance while reducing the load on the ESX server by 94 percent, ultimately reducing the time needed to deploy create, clone and move virtual machines.
- Block zero offload to the array, which delivers 95 percent faster performance while reducing the load on the ESX server by 92 percent, ultimately reducing the time required to provision storage for new virtual machines.
- Hardware-assisted locking, which allows clients to host six times the number of virtual machines per volume than previously possible.<sup>(4)</sup>

For the large percentage of the blade server market deploying storage for HP BladeSystem, the P4800 G2 SAN offers a Converged Infrastructure solution with significantly lower cost and complexity than dedicated external disk systems. HP now offers the P4800 in a two-node configuration at a 50 percent lower entry price. The system also scales up to eight nodes within a new or existing BladeSystem c7000 enclosure. Combining the features of SAN/iQ 9.0 with servers, storage and networking into a single infrastructure enables clients to:

- Reduce unplanned downtime by 83 percent<sup>(5)</sup> with a single Insight Control hardware management infrastructure for servers, networking and storage.
- Reduce costs and improve capacity utilization with thin provisioning and global configuration features that eliminate over-provisioning as well as aggregate management tasks. As a result, clients can manage 100 nodes as easily as a single system.<sup>(6)</sup>
- Reduce network costs with HP Virtual Connect Flex-10. The HP P4800



can transfer all network traffic within a single enclosure, bypassing dedicated external SAN switches for high-performance while eliminating wasted network bandwidth.

- Reduce data center footprint with 14 large form factor drives per unit of rack space which is a 133 percent improvement over existing HP P4000 SANs.<sup>(7)</sup>
- Speed return on investment and reduce management complexity, enabling clients to recoup the cost of an HP P4800 within one year.<sup>(8)</sup>

### **Pricing and availability<sup>(9)</sup>**

The HP P4800 G2 SAN starts at \$148,000 and the HP D2D4324 Backup System starts at \$149,999. Both are available immediately.

- (1) Based on 20:1 deduplication.
- (2) "HP D2D Test Validation Report," Evaluator Group, September 2010
- (3) Comparison of D2D4312 and D2D4324 and comparison of available pricing information of D2D4324 and DD860 96 TB product (based on available pricing (January 2011)).
- (4) vStorage API for Array integration performance characterization for block zero offload and hardware-assisted locking.
- (5) "Gaining Business Value and ROI with HP Insight Control software," IDC, September 2010.
- (6) P4000 family product specifications.
- (7) Comparison of P4800 SAN configurations vs. 12 drive P4500 SAN.
- (8) "Business and Operational Benefits Achieved with HP P4000 SANs," ESG White Paper, <http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA2-7788ENW.pdf>.
- (9) Estimated U.S. street prices. Actual prices may vary.

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