

Brochure

Powerful data protection with Deduplication 2.0

HP StoreOnce backup insurance for your data



The next generation of deduplication

Data protection: it's a bit like liability, casualty, and other insurance—isn't it? You'd just as soon never need it, but it's essential when problems arise. And the cost of data protection "insurance" is not just the cost of equipment and staffing. It also includes the degradation of your business operations when:

- A backup window runs too long
- It takes too long to restore lost or damaged data
- Data at remote locations isn't properly protected
- You get dinged by a regulatory auditor
- A tape falls off the truck and ends up in the wrong hands

A few years ago, two technologies emerged to dramatically improve the industry's ability to protect data. The cost of disk drives came down, and deduplication technology was introduced. This breakthrough is sometimes referred to as Deduplication 1.0.

Like any technology, you'd expect it to evolve over time. HP launched the HP StoreOnce deduplication technology roadmap in 2010 to do just that. The result? Deduplication 2.0. This next generation's deduplication addresses some of the issues inherent in existing deduplication solutions: performance, flexibility, and data management.

Deploy across multiple HP platforms

HP StoreOnce is built upon an HP-developed single deduplication algorithm, which works across the company's data protection hardware and software platforms. In other words, you can deploy the HP StoreOnce deduplication engine across multiple HP platforms, including the HP B6000 series, the HP 2600 and HP 4000 series, and HP Data Protector backup software. By contrast, Edison Group reported in a 2011 white paper that a competitor relies on three distinctly different products (Data Domain, Avamar, and Celerra) to meet the needs of large organizations.¹ This bolting together of dissimilar solutions is in stark contrast to the single, unified architecture that HP offers.

Address critical data protection problems

HP was able to identify the most pressing data protection problems by drawing on its long history of helping customers protect their data. Through this experience, HP has recognized four data protection challenges that affect nearly all of its customers in one way or another.

- Backup windows
- Disaster recovery (DR)
- Remote office data protection
- Restore performance

1 "The Emergence of a New Generation of Deduplication Solutions: Comparing HP StoreOnce vs. EMC Data Domain,"
Edison Group, November 2011.



Backup windows: Protecting more data in constant or even shrinking backup windows is the challenge. Dealing with ever-increasing amounts of data with capacity and performance that can be added on an as-you-need-it basis is the answer. The competition uses a scale-up architecture, while HP solutions use a scale-out architecture. The result? A pay-as-you-grow model that bans forklifts from the data center. This means you can add performance when you need it. No need to spend money on unneeded capacity up front. Today, HP offers up to 768 TB of raw capacity and up to 100 TB/hr backup speeds. So, if the competition needs eight hours to back up your data, HP can do it in as little as 2.5 hours. That keeps your business operating an extra 5.5 hours each and every day. What are three extra months of operational time per year worth to your organization?²



Disaster recovery: Having data protected in the right locations to survive site and even regional disasters is the challenge. HP makes this easy by offering a variety of replication options that are able to use low-bandwidth links since only deduplicated data is moved from site to site. HP StoreOnce also permits you to deduplicate your data wherever you want to—not where some vendor wants you to. You can deduplicate data at the application source, at the backup server, on any HP StoreOnce backup appliance (e.g., HP StoreOnce 2600, 4200, and 4400) and, of course, on the HP B6200 enterprise target appliance. This can be done before data is moved from one site to another. And, if your DR strategy involves having copies at several locations, the multisite and multihop DR options that HP offers can be ideal.



Remote office protection: A large amount of valuable data resides at remote locations. Too often it's not adequately protected. HP StoreOnce takes care of all this. You can reliably get a backup and a DR copy of data at any location without the need for onsite expertise. And it's affordable. The HP StoreOnce family includes a range of hardware and software solutions.



Restore performance: Investing in backup is futile if you can't restore your data fast enough to meet your service-level agreements (SLAs). Most suppliers still focus their designs only around backup, and sometimes their restore performance is so compromised that it's not even found in their specifications. HP is different. We proudly advertise HP's industry-leading restore speeds of up to 40 TB/hr. Across HP's StoreOnce backup appliance portfolio, HP provides an estimated restore speed of 80% of the native ingest speed.

Reducing management effort by 50 percent

Deduplication 1.0 solutions solved some very important problems, but they also introduced some new ones. For example, with Deduplication 1.0 solutions, the backup application controlled the backup itself and the backup appliance controlled all data movement. That is, the backup application and the backup appliance required two data management tools. The result was more management overhead and complexity. With Deduplication 2.0, the backup application controls both the backup of data and all data movement, reducing two management tools down to one.

² EMC's top-end enterprise-class BU appliance is the DD990. Its maximum BU speed with BOOST is 31TB/hr. The maximum BU speed for a B6200 with Catalyst is 100 TB/hr. Assume the DD990 backs up all of customer's data in 8 hours. The B6200 could back up this same amount of data in 2.5 hours. $(100/31 = 3.2x \text{ faster for HP. } 8 \text{ hours}/3.2 = 2.5 \text{ hours. } 8 \text{ hours} - 2.5 \text{ hours} = 5.5 \text{ hours})$ $5.5 \text{ hours} \times 365 \text{ days} = 2007 \text{ hours. } 2007 \text{ hours}/24 \text{ hours per day} = 83.6 \text{ days}/30 \text{ days per month} = 2.8 \sim 3 \text{ months. } 6 \text{ hours} \times 365 \text{ days} = 2190 \text{ hours. } 2190 \text{ hours}/24 \text{ hours per day} = 91 \text{ days. } 91 \text{ days}/30 \text{ days per month} = 3 \text{ months.}$

Fitting into your environment

HP StoreOnce products are designed to work using all the popular backup applications, so you don't need to rip and replace as you do with some of the competitive alternatives. If you do want to upgrade your current backup application, there are some compelling reasons to take a closer look at HP Data Protector—it offers functionality that you just can't get elsewhere. Here are two examples.

1. HP Data Protector uses the same HP StoreOnce deduplication algorithm. This enables it to share deduplicated data with HP StoreOnce appliances in a deduplicated state without rehydration.
2. Data Protector supports context-based searching of backed-up data. This means you can recover files by what's in them rather than by file name. One important application of this capability is eDiscovery. This is possible because Data Protector is now powered by Autonomy's Intelligent Data Operating Layer (IDOL) platform, which provides a unique and fully featured data management solution.

Is tape dead?

Hardly! Unlike competitors that do not supply tape devices, HP offers both deduplication appliances and tape libraries. Why? Because our customers want them. Tape is still the most cost-effective solution for long-term data retention. If you need to keep data for years and even for decades, tape is your answer.

Next steps

Your company wouldn't exist without property, liability, and other key insurance. Likewise, don't unnecessarily put one of your most valuable assets, data, at risk. You never know when a disaster will strike, so allow us to understand your environment and propose a Deduplication 2.0 solution that improves your data protection and lowers your costs.

Just contact your certified HP partner or your HP Storage specialist to learn more. Thank you for allowing HP to assist you with this business-critical requirement.

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