

Speed matters

Did you know that HP StoreOnce Backup appliances are the market leader in backup and restore performance? HP StoreOnce Backup has 4.5X faster backup and recovers 5X faster than other competing solutions in the market.¹

Today's fast growing data is no longer confined to the physical boundaries of the data center, but resides in many different locations: with users (local and remote) or spread across the organization—often in different versions, different formats, and on different media. In this new IT environment, it makes sense that virtualization and cloud services offer the approach that can deliver the dynamic IT infrastructure needed to offer agility and cater to distributed users—while working within the confines of shrinking IT budgets. When you have voluminous data sets growing at an unabated rate, in formats that are unique and complex, how do you address your backup and recovery needs? While relying on traditional backup and recovery solutions can complicate matters, a better approach is to use a solution that enables your IT organization to make decisions that are more intelligent by integrating predictive analysis and an adaptive approach to backup and recovery.

Key benefits of HP Data Protector software

- Increase storage capacity and scale together with StoreOnce leveraging federated deduplication
- Achieve business continuity in mission-critical environments with advanced HP 3PAR snapshot integration and mission-critical application protection
- Anticipate and proactively address issues, while improving infrastructure utilization, with predictive analytics
- Decrease downtime with built-in Enhanced Automated Disaster Recovery (EADR)
- Comprehensive protection for virtualized environments with fully automated, policy-based protection, and simple, highly efficient single item VM recovery via SmartCache

Adaptive data protection with HP StoreOnce and HP Data Protector

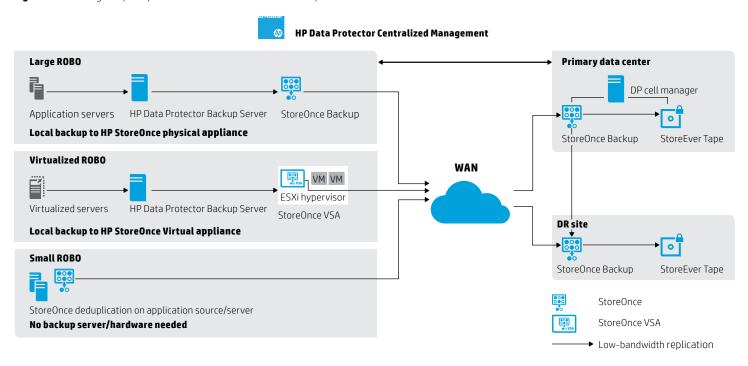
HP's unified data protection solution combines the power of HP StoreOnce Backup and HP Data Protector software to deliver an adaptive and progressive data protection approach that delivers transparency, predictability, and business resiliency within your IT environments. With HP solution, you can spend less time and money on backups and restores, and focus more of your effort and resources on revenue generating activities.

With HP solution, you can:

- Back up more data faster: HP offers a flexible set of backup target options that are built on a common core technology, HP StoreOnce. Designed with a modular approach for flexibility, HP StoreOnce can be deployed as a pure software store running on any industry-standard hardware, virtual machine (VM), or dedicated HP StoreOnce Backup appliances. HP StoreOnce deduplication uses many advanced algorithms to deliver speed and efficiency that helps you save storage costs up to 95 percent. It delivers industry's fastest backup speed, 139 TB/hr, mitigating lengthy backup windows so applications stay available and your business stays productive. Lastly. with Data Protector's support for Federated Catalyst and Catalyst over Fibre Channel, mission-critical backup and recovery at scale is possible.
- Gain analytical insights and adaptive intelligence: Optimizing the backup and recovery process with an approach that also addresses tomorrow's needs requires the ability to derive value and insight from backup-related operational information. HP backup solution delivers analytical insights through a highly interactive and intuitive dashboard that enables IT to gain better utilization of backup resources, make informed decisions related to future capacity and infrastructure needs, and proactively address current and potential issues in the backup environment.
- System-wide deduplication: HP StoreOnce allows you to create a single deduplication with automatic load-balancing store across the entire appliance simplifying backup administration and improving storage efficiencies. Which means that when Data Protector leveraged Federated Catalyst, organizations can scale their backup environments non-disruptively and gain the benefit of additional capacity as they need it.
- Simplify and streamline data protection: HP backup solution simplifies data protection management by providing a single, centralized, and highly intuitive dashboard for orchestrating backup, recovery, disaster recovery (DR), and replication processes. This mitigates the cost and complexity associated with managing a large-scale enterprise and remote office and branch office (ROBO) environment.
- Back up data in remote locations while using a lot less bandwidth: HP StoreOnce can be deployed at multiple points in your enterprise, so deduplication can happen at the application source, on the backup server, virtual VM appliance, or on the target appliance. Once data is deduplicated, it can be moved quickly and efficiently around the enterprise without having to be rehydrated. This means HP StoreOnce requires less bandwidth than traditional solutions, making it ideal for quick and cost-effective backing up of data in remote and branch offices.

The maximum backup speed for HP StoreOnce 6500 with Catalyst is 139 TB/hr compared to EMC DD990 with Boost at 31 TB/hr. HP and third-party testing of restore performance shows restore performance in disk backup systems is equal to or less than native ingest performance. EMC does not publish restore specifications. The published DD990 native Virtual Tape Library TL ingest rate is 15 TB/hr; a restore rate equal to ingest rate would be 15 TB/ hr compared to a published restore rate of 75 TB/hr for the HP StoreOnce 6500 Backup.

Figure 1. Delivering complete protection from remote office to enterprise data centers



HP StoreOnce Get Protected Guarantee!

Reduce backup capacity requirements by 95 percent² when you migrate from your legacy backup system to any HP StoreOnce solution—guaranteed.

Bandwidth throttling—prioritize the use of precious network links

For the most efficient ROBO protection, HP Data Protector features a bandwidth control capability that allows you to configure a greater bandwidth limit that can be used by the backup process. Reduce the need for a dedicated network by virtually creating a class of services for your network.

- ² The maximum backup speed for HP StoreOnce 6500 with Catalyst is 139 TB/hr compared to EMC DD990 with Boost at 31 TB/hr. HP and third-party testing of restore performance shows restore performance in disk backup systems is equal to or less than native ingest performance. EMC does not publish restore specifications. The published DD990 native Virtual Tape Library TL ingest rate is 15 TB/hr; a restore rate equal to ingest rate would be 15 TB/ hr compared to a published restore rate of 75 TB/hr for the HP StoreOnce 6500 Backup.
- ³ A deduplication ratio of 20:1 is a common reference point in the industry. This can be converted to a duplicate data match percentage as follows: (20:1)/20 = 95 percent.

- "Always on" backup: With HP backup solution, you will be able to take advantage of built-in high availability, checkpoint restart, parallel data transfer, and the autonomic failover to help ensure your backups usually run to completion in spite of any unexpected failure. HP backup solution deliver end-to-end business resiliency while reducing administrative burden to manage and protect a large-scale enterprise and ROBO environment. Lastly, with Data Protector's Cloud Copy, organizations can easily gain access to HP Helion, cloud-based storage. This allows organizations to copy on-premise backup data from within a StoreOnce library directly to a highly secure and massively scalable cloud, for long-term retention.
- Accelerate recovery from unexpected events: Disasters can keep critical data and applications offline for hours or days, leading to lost revenues and even damaging your reputation. To get back to business faster, HP backup solution can restore data at 75 TB/hr which is 5X faster than any other data protection solution today.³ Together, HP StoreOnce Backup and HP StoreEver Tape integrate seamlessly to offer a secure, cost- and energy-efficient solution for near- and long-term retention of data. Lastly, with Data Protector's SmartCache, a rapid recovery feature for VM backup/recovery, organizations can save time, preserve storage resources and improve agility by making single item VM recovery from a StoreOnce library simple and more efficient.

Solution spotlight: reliable and cost-effective data protection for ROBOs

For many businesses, backup and recovery in ROBOs is a series of tradeoffs. You may have to choose between the expense of hiring IT staff for small, remote offices and the risk of untrained staff performing backup and restores of your critical data, or using precious bandwidth to perform full replications. HP offers uncompromising, comprehensive, and cost efficient remote office data protection.

First, you can remotely deploy, monitor, and operate Data Protector backup agents from a central location, reducing the need for specialized IT staff in remote locations. With this, you can achieve not only reliable backups but also reduced operating expenditures (OPEX). Second, HP backup solution also uses next-generation deduplication technology that allows you to store more backup data reducing storage footprint. You have options: to backup data locally at a remote office, regionally, or at your enterprise data center—whatever works best for your business. Third, HP backup solution provides low-bandwidth replication which consumes 99 percent less bandwidth than traditional methods saving cost while providing reliable disaster recovery.

HP StoreEver Tape solutions offer:

- Industry-leading scalability of up to 75 PB with LTO-6
- StoreEver TapeAssure proactive monitoring of media and tape drives
- Exclusive dynamic data rate matching enhances performance and reliability of tape drives
- Federal Information Processing Standard (FIPS) compliant Advanced Encryption Standard (AES) 256-bit data encryption, write once, read many (WORM), and secure key management

Get help from HP Services

Need help getting started? HP Services can help. Our team of experts has the strategic and technical expertise you need to design an effective backup and recovery strategy for your entire business, and get more from backup and recovery solutions like HP Data Protector and StoreOnce. We can help you select, design, test, deploy, and manage a unified data protection solution. For more information, visit: hp.com/services/storage.

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Solution spotlight: resilient business continuity and disaster recovery

When disaster strikes, you need to be ready to recover fast—or risk irreparable damage to your business. Restorations from full data copies can take days or weeks, depending on how much information you've stored and how much bandwidth is available, resulting in longer outages and loss of productivity.

With HP backup solution, you can apply different retention policies to replicate data to multiple sites simultaneously, or in a cascaded manner. This means you can now define a tiered multisite disaster recovery plans that are both cost-effective and bandwidth-efficient. Restores can be managed from any site from one central console, simplifying administration and lowering cost.

HP also delivers centralized system recovery (bare metal recovery) to virtual or physical servers (from p2v or v2p) from a single backup—at no additional cost—to streamline the disaster recovery process. Unique to HP backup solution, customers can create a disaster recovery image from any existing file system or image backup, including object copies, without needing to create a separate special backup for system recovery.

Solution spotlight: keep your data safe with encryption and secure erase

Protecting sensitive data from stolen or discarded disks or tapes poses serious challenge to organizations.

HP StoreOnce and StoreEver implement industry standard AES 256-bit encryption for data at rest as well as Internet Protocol Security (IPSec)-based data-in-flight encryption. The backup data stored on HP StoreOnce and StoreEver meets FIPS 140–2 level 1 compliant and help you keep the data safe while meeting regulatory compliance requirements.

HP StoreOnce also implements Secure Erase functionality that provides protection against recovery or reconstruction of deleted information. This secure data shredding meets the stringent National Information Security and Technology Special Publication NIST SP 880–88 standard so you can securely erase your confidential data. With HP Data Protection solutions, you can be rest assured that your data remains safe and secure.

Delivering simple, efficient, reliable, and economic data protection

Tape remains to be a critical strategic backup element for more than 70 percent of enterprise customers. The combination of HP StoreOnce Backup, StoreEver Tape, and HP Data Protector software offers a complete business protection solution that enables you to modernize and transform your backup infrastructure to meet data protection challenges in today's IT environments.

Learn more at

hp.com/go/burasolutions hp.com/go/dataprotector





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