

## HP Data Protector software

Data sheet

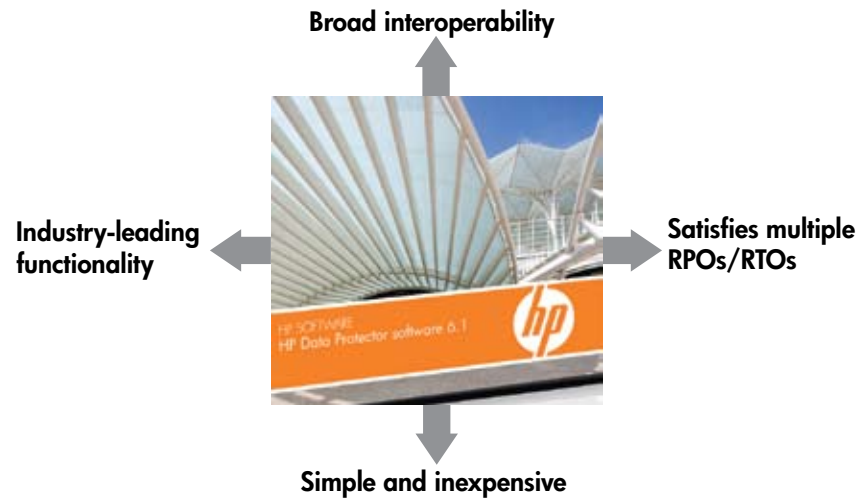
**HP Data Protector software automates high-performance backup and recovery with scalable data protection from disk or tape to enable 24x7 business continuity while providing a compelling price to performance ratio.**

As an important component of the fast-growing HP Software portfolio, HP Data Protector software is an integral part of HP Business Continuity and Availability (BC&A) strategy. Appropriate for medium and large companies in any industry, Data Protector is the ideal solution to reduce IT costs and complexity while remaining reliable and scalable to grow from single server environments to the largest distributed enterprise infrastructures. With over 35,000 customers worldwide, Data Protector is used by nearly half of Global 500 corporations in physical and virtual environments.

Data Protector software responds to the pressure for lower IT costs and greater operational efficiency by offering acquisition and deployment costs which are 30–70 percent less than the competition. The licensing model is simple and easy to understand, helping to reduce complexity. Extensive scalability and features for continuous backup and recovery operations enable growth with a single product.



**Figure 1:** Enterprise-class, low-TCO backup and recovery



## Key Benefits

### Broad Interoperability

Data Protector is a mature, enterprise-class data protection platform that provides broad interoperability across all leading IT environments and is uniquely best in class in its integration with HP storage hardware.

HP Data Protector software supports the fast backup and recovery of dozens of major applications used by enterprises. Not only does it fully integrate with the HP Software portfolio, but also provides multi-vendor support for heterogeneous environments, including support for dozens of non-HP vendor's hardware. Within the HP Software portfolio, HP Data Protector software enables customers to manage data protection as an integral component of an overall IT service.

HP Data Protector software offers flexibility and choice through best-in-class integration with HP storage hardware. Unlike many of HP competitors who offer partial or incomplete solutions, HP offers the advantage of providing an integrated hardware and software solution from a single, trusted vendor.

### Industry-leading Functionality

HP Data Protector offers a wide range of industry-leading capabilities. These include:

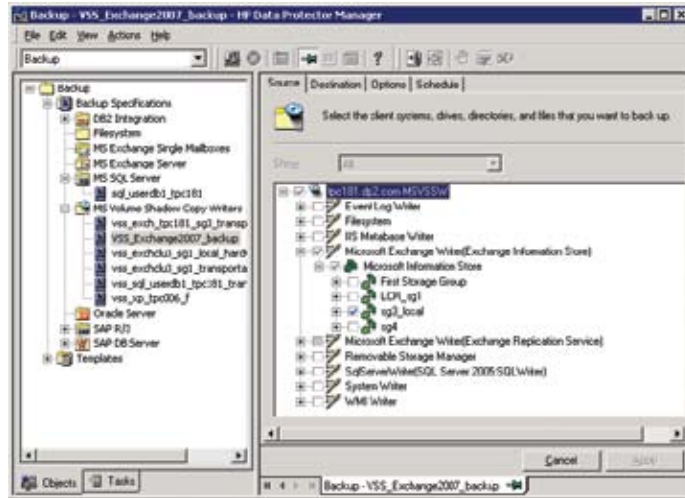
- Management of both the physical and virtual environments, with support for all leading virtualized server environments
- Automated backup and recovery procedures, including software distribution, device configuration, library detection, and more
- Unique virtual and synthetic full backups for space reduction
- Sophisticated User-Interface based replication management which fully integrates with HP storage and with unique Zero Downtime Backup (ZDB) capabilities and Instant Recovery (IR) functionality

### Multiple Recovery Point Objectives/ Recovery Time Objectives

Data Protector provides all the building blocks to satisfy the various business recovery point and recovery time objectives by giving customers an additive model to select methods that meet the needs of their various classes of data; in some cases this means tape for general data, backup to disk for more business-critical data and for their highest requirements, methods of continuous data protection.

**“The operation of the Data Protector is extremely logical and intuitive and offers a tremendous amount of flexibility. This allows us to achieve significant time-savings and has resulted in a 60 percent decrease in support costs compared to the previous back-up/restore system that was much more complex.”**  
**Peter Kloet, Senior System Administrator,**  
**Springer Science + Business Media Account Manager**

Figure 2: HP Data Protector software 6.1



HP Data Protector provides extensive scalability and features for continuous backup and recovery operations. Companion archiving solutions offered within the HP Software portfolio augment these benefits by shrinking backup data volumes for faster backups, faster recoveries and greater scale.

### Simple and Inexpensive

HP Data Protector software is simple to implement, use and maintain, and is inexpensive, especially when viewed against the broad set of backup and recovery features it offers. With the simplest and most flexible licensing model in the industry, HP Data Protector software requires no client licensing. It is a scalable solution that grows from a single server to an enterprise, and is the ideal solution for remote and distributed environments through distributed architecture with multi-site management. The centralized multi-site management easily allows implementing multi-site changes, adapting in real time to changing business requirements.

## Key Features

### Advanced Backup to Disk

Advanced Backup to Disk meets the demand for fast and direct restore from disk with the ideal solution for customers who want to stage the backup on fast central disk space before optionally moving it to tape. The advantages to backing up to disk are:

- **Reduced recovery time:** When you backup to disk, you can restore data instantly, unlike a tape drive that has to be mounted, loaded and searched.
- **Improved backup performance:** Backing up to disk allows data to be copied at the optimum level of performance—whether you’re performing a full backup or smaller incremental backups.
- **Storage capacity reduction:** Data reduction technology (Virtual and Synthetic Full) helps eliminate the need to backup the same data multiple times therefore reducing the disk and tape capacity
- **Branch office backup consolidation:** Backup to disk allows you to copy the data at distributed branch offices to a central site for consolidated backup.

For a complete breakdown of the capabilities of this optional extension to HP Data Protector, see the [Advanced Backup to Disk data sheet](#).

### Storage Capacity Optimization

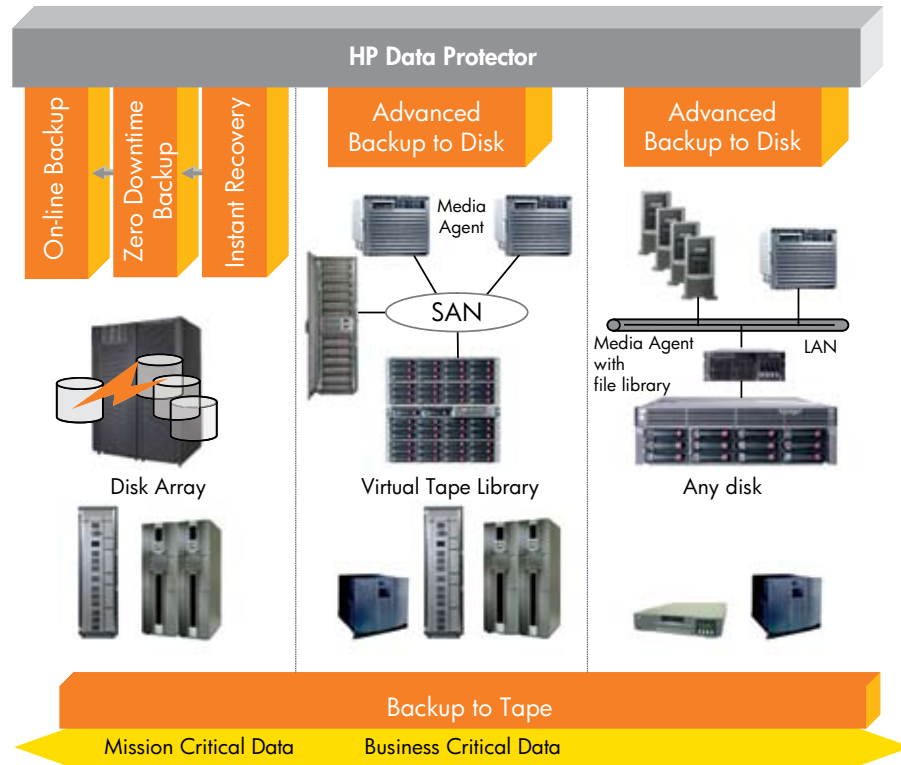
HP Data Protector provides you with four options for optimizing your storage capacity including its unique virtual full capability, deduplication options and integration with the HP Integrated Archive Platform:

**Synthetic Full Backup/Virtual Full Backup:** Synthetic backup puts a stop to the buildup of incremental backups, and eliminates the need to run lengthy full backups. This technology works by merging all incremental backups into a full “synthetic” backup—a process that can be repeated indefinitely, with no need to run a full backup again. If all the backups,

**“Among enterprise products, HP users seem to be the happiest overall”  
“HP had the highest score of any product for ‘This product delivers good value for the money’”**

**Storage Magazine & Diogenes Labs Quality Awards,  
Enterprise Backup & Recovery Software, September 2008**

**Figure 3:** Backup to Disk Technologies



full and incremental, are written to the same file library which uses a distributed file media format, an even more efficient type of synthetic backup is possible. This is called Virtual Full Backup. The solution uses pointers to consolidate data rather than copying the data. As a result, the consolidation takes less time and avoids unnecessary duplication of data. This capability also helps enable continuous data protection for Windows systems. For systems running Windows 2000 and above, HP Data Protector utilizes the built-in Microsoft Windows Change Journal to quickly generate a list of files that have been altered since the last backup was performed. This option avoids the need for timely “tree walks” to identify files that have changed, which can be especially time-consuming on systems with many small files. This allows incremental backups to run much faster and more frequently, providing near-continuous data protection at no additional cost.

**Backup to Virtual Tape with Deduplication:** Data Protector takes full advantage of the capabilities in virtual tape libraries (VTL) offering de-duplication capabilities. Using these capabilities, companies can store up to 50 times as much data in a given amount of disk space. Refer to our constantly updated listed of supported vendors and devices at [www.hp.com/go/dataprotector](http://www.hp.com/go/dataprotector), and click “Support Matrices”

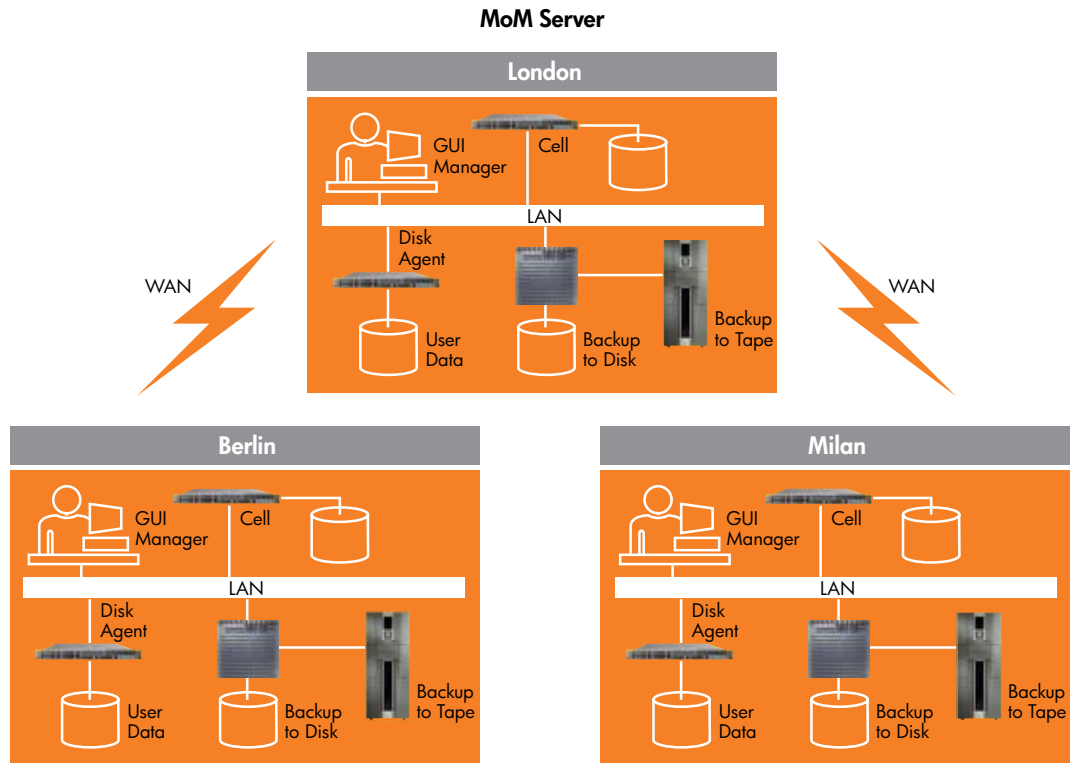
**Advanced integration with HP Virtual Library System (VLS):** Data Protector achieves unique integration with HP Virtual Library System (VLS) using

features such as Smart Copy and Low Bandwidth Replication to provide automated and transparent movement of data between the VLS and physical tape libraries. By offloading the copy operations to the VLS, traffic on the SAN is reduced, and space can be freed up on the VLS for additional disk backups. This process is completely managed and controlled through Data Protector. Low Bandwidth Replication provides backup data replication for VLS and D2D systems over long distances even on low bandwidth links. Data Protector can automatically populate the catalog information on the target side, providing very fast restore both on the primary and secondary site, reducing the Recovery Time Objective in Disaster Recovery situations.

**Backup to HP IAP with single instance storage:** HP Data Protector isolates unique client files and copies them into the HP Integrated Archive Platform (IAP), reducing the amount of backup data and allowing Data Protector customers to take advantage of several important IAP capabilities:

- Content-aware search, for the retrieval of information with specific content, to ensure compliance and e-discovery needs can be met quickly and easily
- Single instance storage for maximizing available storage capacity and eliminating the redundant storage of data
- End-user restore, providing end-users with the ability to restore individual files themselves, all through a single Web interface

Figure 4: MoM Architecture Diagram



## Zero Downtime Backup/ Instant Recovery

Zero Downtime Backup (ZDB) addresses the needs of data centers with zero tolerance for performance impact and the need to eliminate backup windows. ZDB is a replication-based backup to disk technology which leverages array-based solutions, performing the backup on the copy of the production data to achieve zero impact backup. Instant Recovery (IR) takes this a step further by retrieving data directly from the replicated images on disk, allowing customers to recover critical data in minutes. By shifting the focus from backup to recovery, HP can help IT organizations look at protection in a new light and take advantage of a new set of tools to improve the quality of their recovery strategies.

For a complete breakdown of the capabilities of these optional extensions to HP Data Protector, see the [Zero Downtime Backup/Instant Recovery data sheet](#).

## Manager of Managers

For multi-site operations, the Data Protector Manager-of-Managers (MoM) allows distribution of control to local administrators while maintaining the ability to set overall policies and monitoring the entire enterprise backup environment from a central point. As a result, corporate policies can be implemented without diminishing local control and responsibility, while data protection and storage management costs do not change.

The Figure 4 shows multiple Data Protector “Cells,” which are also referred to as domains. Each Cell has one Cell Manager system where the essential Data Protector software is installed and from which all backup and restore activities are managed. Several Data Protector Cells can be grouped together, configured and managed from a central Cell. The Cell Manager of this central Cell is the MoM.

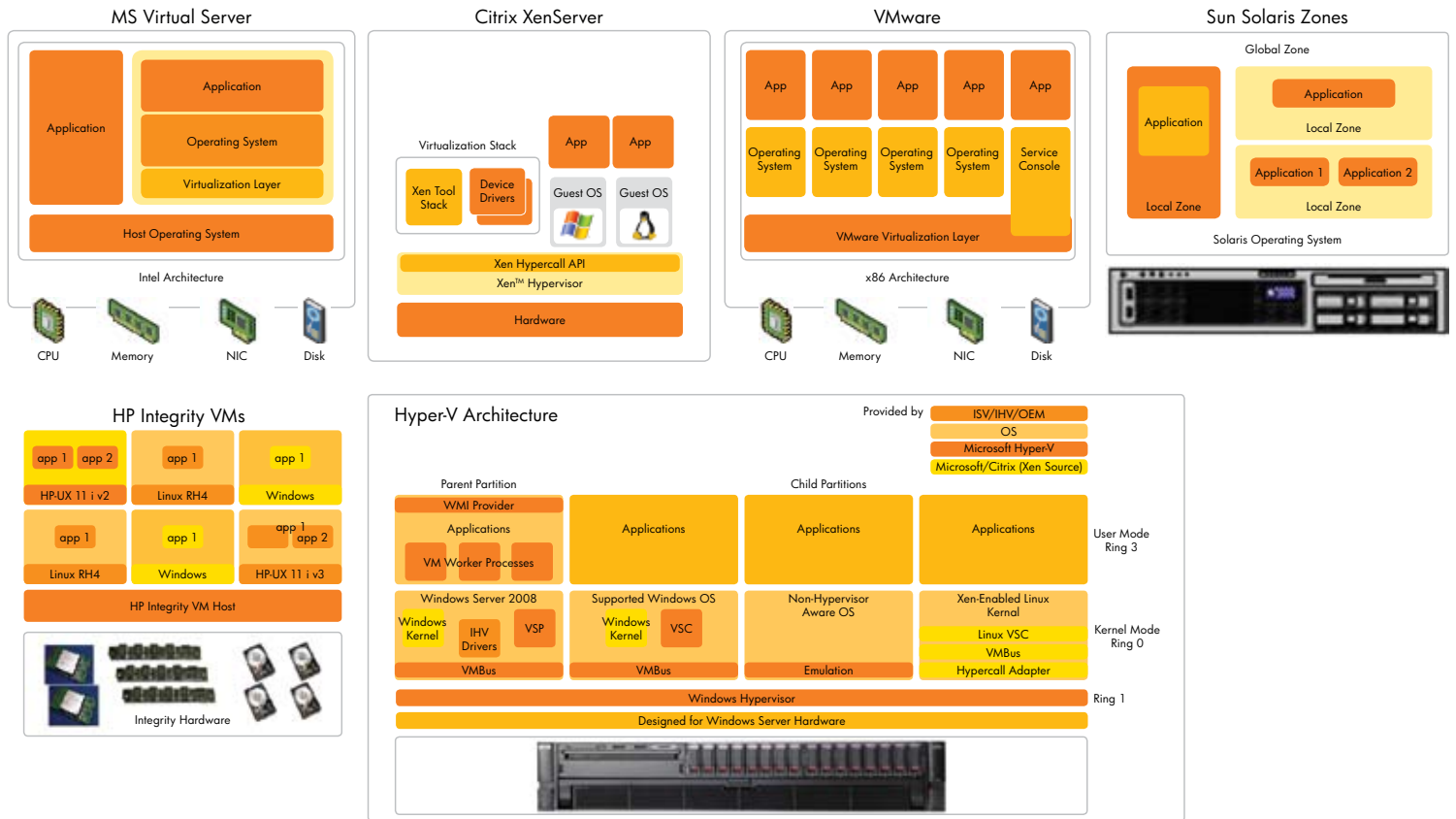
Using the MoM interface allows customers to scale a Data Protector backup environment to include hundreds of Disk Agents and Media Agents. In this way, the Cell Manager of the central Cell becomes the MoM, and the Data Protector Cells become the MoM clients.

Available as an optional extension to HP Data Protector, MoM enables virtually unlimited growth of the backup environment. New cells can be added or existing ones split. A MoM environment does not require a reliable network connection from Data Protector Cells to the central MoM Cell, because only controls are sent over the long distance connections, and backups are performed locally within each Data Protector Cell.

Customers may decide to split large environments into multiple Cells for a number of reasons:

- Geographical grouping of systems
- Logical grouping of systems; for example, departments
- Slow network connection between some systems
- Performance considerations
- Separate administrative control

**Figure 5:** Virtualization platform support enhancements



## Complete Protection for Virtualized Servers

With HP Data Protector, you benefit by having powerful software which manages both physical and virtual environments. Data Protector supports all leading virtualized environments, such as VMware, Microsoft Hyper-V, Citrix XenServer, Microsoft Virtual Server, Sun Solaris Zones, and HP Integrity VM—and in each case, with a variety of options and flexibility in protecting data. In addition, Data Protector can manage all physical and virtual backups from one simple, easy-to-use interface.

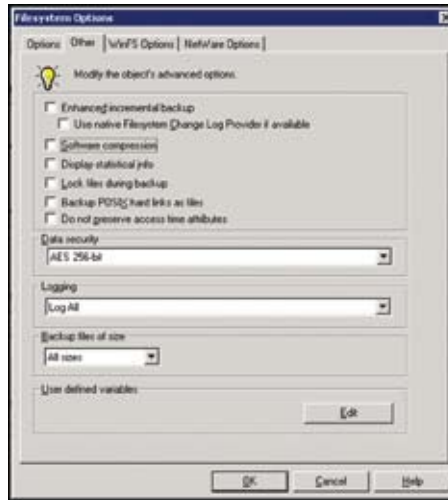
For Citrix XenServer, backup agents can be loaded directly on the virtual machines for single object backup and recovery, leveraging the rich and seamless Data Protector application integrations—and providing the ability to restore those applications to virtually any point in time. It is also possible to use a proxy system to offload the backup job from XenServer. Using the proxy system both online and offline (suspend) backup can be performed for the Virtual Machines. Filesystem and application backups are supported. And with other operating systems, such as HP Integrity VM and Microsoft Virtual Server 2005 (with VSS support), you now have the additional option

of loading a backup agent directly on the hosting OS—enabling SAN-based backups, and enabling robust disaster recovery by providing the capability to protect and restore an entire VM with crash-consistent, snapshot-based backups at the click of a button.

**Advanced protection for VMware and Microsoft**  
 HP Data Protector software provides complete, advanced and easy to use protection for VMware environments and Microsoft Hyper-V.

Using a fully integrated VMware application agent, a snapshot-based, on-line backup of virtual machines can be initiated or scheduled at any time—and it can all be managed through the Data Protector user interface. The VMware application agent fully supports key VMware infrastructure components, such as VMotion and DRS. VMware Consolidated Backup (VCB) is also supported, so that the backup can be completely offloaded from the ESX server and Virtual Machines (VM) if desired. Simply choose to install the agent on the ESX server itself, or a VCB proxy server—providing you maximum flexibility to meet the needs of every environment. Within this VMware ESX-based backup methodology, incremental snapshots are also supported, to further minimize the impact on both the ESX servers and the network. Data Protector provides the same robust

Figure 6: AES Encryption



support for Microsoft Hyper-V. Data Protector takes full advantage of Hyper-V's VSS infrastructure to provide guaranteed application consistency. Using the VSS hardware provider (on supported devices) completely offloads this process to a dedicated proxy host, resulting in no performance impact to the virtual "guest" systems. Both of these methods are implemented by calling VSS writers from inside the VM, without any additional licensing requirements. Data Protector also allows users to perform a full VM restore—or a partial one—or even an offline backup with support for transportable snapshots.

## Overcome Virtual Server Backup Challenges

Data Protector Zero Downtime Backup (ZDB) and Instant Recovery (IR) offers a powerful solution for VMware and Microsoft virtual environments. The ZDB/IR agent first takes a snapshot of data on the virtual machine (VM) and migrates the snapshot to a proxy host. Backup operations are then performed on the snapshot. This unique solution allows administrators to avoid many of the challenges associated with virtual server backup:

- Impact-free backup at all layers
- No load on the servers or VMs
- Instantaneous recovery of all application data

For a complete breakdown of the data protection capabilities of Data Protector in virtual server environments, please see the [HP Data Protector Virtualization solution brief](#).

## Ensuring Security Compliance

Keeping your data secure is easy with the centralized key management feature in Data Protector. With a Data Protector solution, customers have the choice of

client-based encryption for end-to-end security of their data, or they can take advantage of the encryption functionality in LTO-4 tape drives for encryption with no performance impact on backup speeds.

Either way, the data is secure with AES 256-bit encryption (the most advanced available), ensuring full compliance with all government and regulatory requirements. And most importantly, all encryption keys are managed centrally within Data Protector.

## Warranty

HP warrants only that the software media will be free of physical defects for a period of ninety (90) days from delivery. For more information about HP Global Limited Warranty and Technical Support, visit [www.hp.com/products/storageworks/warranty](http://www.hp.com/products/storageworks/warranty)

## HP Software Support

HP Software provides a portfolio of support offerings to meet your individual business needs:

- HP Software Support 9x5
  - 24x7 web-based intelligent response
  - Software discovery and license history
  - Software patches, updates and upgrades
  - Phone-in 9x5
- HP Software Support 24x7
  - Same as above but with 24x7 phone-in assistance
- HP Software Engineering Days
  - Technical assistance delivered either remotely or on-site by highly qualified and experienced support personnel.

For more information on these support offerings, please see [www.hp.com/go/hpsupport](http://www.hp.com/go/hpsupport)



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To learn more about our extensive HP Software training offerings, including course detail, please visit us at [www.hp.com/learn/hpsw](http://www.hp.com/learn/hpsw)

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[www.hp.com/go/hpfinancialservices](http://www.hp.com/go/hpfinancialservices)

## HP Services

### Scalable, flexible, and reliable

The HP Backup & Recovery Solution Services provide customers with improved speed and confidence in IT infrastructure deployment, and prepare their IT staff and processes for operational success. These services are a suite of scalable, clearly defined service engagements that provide product and solution deployment consistent with HP specifications. Solution Services help ensure a successful implementation, improve the productivity of your technical staff and allow your IT resources to stay focused on their core tasks and business priorities.

For more information visit [www.hp.com/services/backup](http://www.hp.com/services/backup) or contact your HP sales representative or authorized business partner.

To learn more about HP Data Protector software, visit: [www.hp.com/go/dataprotector](http://www.hp.com/go/dataprotector). Also visit, [www.hp.com/go/imhub/dataprotector](http://www.hp.com/go/imhub/dataprotector) for HP Data Protector software Interactive digital hub site; [www.hp.com/go/quickspecs](http://www.hp.com/go/quickspecs) for Quickspecs with detailed product specifications, ordering information, and [Support Matrices](#) for the latest HP Data Protector software support matrices.

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