

Overview

An intelligent approach to data protection

HP Data Protector is the industry's first Adaptive Backup and Recovery solution that uses an intelligent approach to data protection and management. Advanced integration with applications and infrastructure, and operational analytics to optimize backup and recovery process, help you to improve business continuity, and boost uptime within your IT environments. With HP Data Protector, you can centrally manage and protect critical data scattered across remote sites and data centers in physical, virtual, and cloud infrastructures. Today, more than 45,000 customers worldwide use HP Data Protector software to safeguard their business information.

In the IT arena, shifting data center requirements are forcing organizations to reassess backup and recovery processes, strategies, and infrastructure for a number of reasons:

- The need to keep pace with increased data volumes, diverse data formats and complexity
- Advanced data center technologies such as virtualization and cloud
- New business models such as IT-as-a-service (ITaaS) and Bring Your Own Device (BYOD)
- The need to manage and protect data according to tightening internal policies and always-on 24/7 service level objectives

HP Data Protector is helping organizations of every size address these challenges with software that offers advanced data protection capabilities such as HP StoreOnce federated deduplication, integrated cloud backup, Enhanced Automated Disaster Recovery (EADR), Zero Downtime Backup, Instant Recovery, advanced virtual server protection, and mission-critical application recovery down to the exact second. With HP Data Protector, you gain better transparency, predictability, and business resiliency within your IT environments.

Key Product Highlights

Analytical insight 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 Data Protector, along with companion products HP Backup Navigator and HP Data Protector Management pack, 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.

HP StoreOnce federated deduplication

HP StoreOnce is a patented, deduplication technology that is deployed with HP Data Protector software and HP Storage systems. Today, only HP can deliver the same deduplication algorithm that scales from a software-only footprint to a scale-out, purpose-built appliance, enabling efficient data replication and storage.

Cloud-based backup

Through integrated cloud protection, HP Data Protector extends backup to the cloud, blending the two worlds of on-premises and secure hosted backup into one offering. The integrated cloud capability brings the power and simplicity of cloud-based backup to the traditional data center. This integration leverages HP Autonomy's 14 global cloud data centers, managing over 50 petabytes of customer information worldwide.

Enhanced, automated Disaster Recovery

HP Data Protector software 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 Data Protector, customers can create a disaster recovery image from any existing file system or image backup, including object copies, without creating a separate special backup for system recovery. With a single click, you can initiate the disaster recovery process and automatically rebuild your entire system and the partitioning.

Advanced application protection

Data Protector offers advanced functionality to simplify and automate application protection and recovery, allowing you to automate

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the entire recovery process by rolling forward the application transaction logs and recovering applications to an exact point in time. Data Protector's advanced snapshot functionality protects mission-critical applications without impacting application performance, and provides automated recovery for applications and data in seconds to meet even the most demanding recovery objectives.

Comprehensive virtualization support

HP Data Protector provides comprehensive virtual server protection by supporting all hypervisors. With VMware and Hyper-V, Data Protector offers advanced hypervisor integration and array snapshot management for the most demanding virtualized applications. For VMware, Data Protector also offers One-Touch protection, automatic protection of new VMs, single item recovery, and native best-in-class integration for vCloud Director environments.

Centralized management

HP Data Protector offers a single console to centrally manage data protection for physical and virtual servers across on-premises, hybrid, and cloud infrastructure. The product offers best-in-class integration with HP Storage from tape automation to array snapshots and replication from a centralized console without scripting to support any RPO/RTO.

What's New in HP Data Protector 8.1 - Highlights

HP Data Protector 8.1 transforms traditional backup and recovery models by leveraging application and infrastructure awareness and operational analytics to improve business resiliency, continuity, and uptime within IT environment.

- **SAP HANA integration** - Offers comprehensive backup and recovery to SAP HANA in-memory databases, recreates logs while the database is online, and restores data and performs database recovery to a state at a specific point in time or the most recent restorable state. The integration empowers application owners to drive backup and recovery decisions and controls through SAP HANA administrative console. This integration is done via SAP HANA Backint APIs.
 - **Disaster Recovery enhancements** - Augments Enhanced Automated Disaster Recovery (EADR) with new object selection methods, restore options, and wizard pages that further simplify and automate disaster recovery. With DP 8.1, administrators will be able to inject additional drivers in the image during backup which will reduce the system recovery time.
 - **HP StoreOnce enhancements** - Introduces HP StoreOnce encryption support at the target and delivers superior storage efficiency with improved object compression.
 - **Instant Recovery support for HP 3PAR StoreServ** - HP Data Protector can orchestrate snapshot creation, management, and backup for 3PAR StoreServ array on Windows, Linux, and HP-UX platforms. Data Protector 8.1 extends Instant Recovery support to HP-UX and Linux platforms via a native agent completing the Snapshot and Instant Recovery support for file systems, Oracle, SAP, and Microsoft applications running on Windows, HP-UX, and Linux platforms on HP 3PAR StoreServ.
 - **Priority-based scheduler** - Data Protector 8.1 introduces a new Advanced Scheduler that includes flexible, more granular options to create a backup policy. The Advanced Scheduler also empowers backup administrators to specify the priority of different backup data, based on an organization's unique business requirements. This feature ensures that mission-critical applications are protected before less important data in resource constraint environments.
 - **Extensive platform integration** - Data Protector 8.1 includes new integration with Microsoft® Active Directory and VMware vCenter 5.5 for Single Item Recovery, and certification of both VMware vSphere 5.5 and vCloud Director 5.5. HP Data Protector 8.1 also features many new platform certifications, such as application agent support for Microsoft SharePoint 2013 and IBM DB2 10.5, disk agent support for Debian 7.0 and AIX 64-bit, and media agent support for AIX 64-bit and Solaris 11.1.
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What's New in HP Data Protector 8.11 - Highlights

The HP Data Protector 8.11 release builds on the capabilities of Data Protector 8.10.

- **Enhanced VMware integration** - Improved VMware backup performance ensures data streams stay on SAN infrastructure and enable faster single disk restore from image backup.
- **Improved Disaster Recovery** - Enhanced Automated Disaster Recovery now offers check point restart capabilities as well as support for space efficient sparse file restore and Windows 2012 R2.
- **Extended platform coverage** - Extending platform coverage across the latest versions of NDMP, RHEL, Windows and Oracle, to ensure your enterprise is protected. For detailed information, see the support matrices at www.hp.com/go/dataprotector.
- HP Data Protector complimentary products
- **HP Backup Navigator** - This highly interactive and intuitive reporting application combines strong visualization and real-time operational analytics to simplify and optimize the backup and recovery experience for HP Data Protector environments.
- HP Backup Navigator delivers a range of capabilities, including:
- **Intelligent dashboards** - Dashboard reports provide valuable insights into the key performance indicators of the backup and recovery process, and more importantly, they're interactive and customizable allowing the IT administrator to filter, change, and modify views
- **Real-time predictive analytics** - Gain visual foresight into the backup and recovery process based on daily use, along with trending and forecasting algorithms to reveal future performance and capacity gaps and requirements specific to your data set characteristics, infrastructure capabilities, and organizational requirements
- **Rapid root-cause analysis and problem solving** - Proactively detect and address potential resource conflicts and systematic/systemic issues before they cascade into outages and data loss that negatively impact business operations.
- **Collaboration and cross-system support** - Automate the report creation process, allowing them to be scheduled and shared with stakeholders within the organization, or securely isolated and made available to external customers relying on the backup and recovery service. The same information can be exported in a variety of formats for inclusion into other organizational systems.
- **Flexible reporting** - Extensible reports can be customized and tailored to match the specific needs of the operator, organization, or customer, relying on the details for decision-making and taking appropriate action.
- **"What-if" scenario evaluation** - Get intelligent insights into current backup and recovery operations before new datasets are included into the process. Such insights can identify whether or not service-level agreements would remain achievable, the impacts to the backup infrastructure (physical capacity, network load, device loads, etc.), and the best ways to balance the demands of new datasets within the existing infrastructure.
- **Data Protector Management Pack** - The solution is designed to extend the functionality of industry-leading IT operation management tools to support monitoring, reporting, and troubleshooting in HP Data Protector environments. The HP Data Protector Management pack supports Microsoft System Center Operations Manager (SCOM), a component of the Microsoft System Center, and offers a cross-platform data center management system that helps you monitor services, devices, and operations for many systems from a single console.

With Data Protector Management Pack, you can:

- Perform discovery and topology presentation of the entire HP Data Protector infrastructure
- Visually check the status of all the clients and devices within your environment
- Get alerts and notifications and proactively take actions to resolve issues in your backup environment
- Perform specific tasks per topology view

NOTE: Both HP Backup Navigator and Data Protector Management Pack are supported for HP Data Protector software version 7.0 and above.

Hardware Support and Software Pre-Requisites

Hardware support

- Broad coverage of HP-UX, Windows, Solaris, Tru64, OpenVMS, NetWare, Linux, AIX, and other operating environments
 - ZDB/IR support for HP P9000/P6000/P4000/3Par, and ZDB support for EMC Symmetrix disk array
 - Built in software Backup to disk such as file library and software de-dupe storage supports any direct connected storage that the server's operating system supports
 - Disk-based backup appliances from HP, EMC, Quantum, etc.
 - HP Tape libraries, StorageTek, ADIC, IBM, etc.
 - For detailed information on HP Data Protector support matrices please visit:
<http://www.hp.com/go/dataprotector>
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Software Pre-Requisites

Cell Manager Requirements The Data Protector Session Manager does not support the IDB on a file system that is mounted as NFS type.

On Systems Running HP-UX (IA64) The Cell Manager must meet the following minimum requirements:

- The Soft File Limit per Process on the Cell Manager should be at least 1024.
 - 8 GBRAM (For recovery of the Internal Database, twice as much total RAM is required.)
 - For each parallel backup session 40 MB of RAM are required and 5 - 8 MB per data segment size. For example, if you want to run 60 parallel backup sessions 3 GB of RAM plus 512 MB for data segments are needed.
 - 1.5 GB of free disk space + approximately up to 2% of planned data to be backed up (for use by the IDB). It is recommended to modify the kernel parameters as follows:
 - Set the kernel parameter shmmax (maximum size of a shared memory segment) to at least 2.5 GB. To check the configuration, execute:
○ kcusage shmmax
 - For recovery of the Internal Database, the parameter should be set to twice the above value.
 - Set the kernel parameter maxdsiz_64 (max data segment size) to at least 134217728 bytes (128 MB), and the kernel parameter semmnu (number of semaphore undo structures) to at least 256.
 - After committing these changes, recompile the kernel and reboot the machine.
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Hardware Support and Software Pre-Requisites

On Systems Running Windows

The Cell Manager must meet the following minimum requirements:

- 4 GB of total RAM. For recovery of the Internal Database, twice as much total RAM is required. Each parallel backup session requires 40 MB of RAM. For example, 60 parallel backup sessions requires 3 GB of RAM.
 - 1.5 GB of free disk space + approximately up to 2% of planned data to be backed up (for use by the IDB) $2 \times \text{size_of_the_biggest_package_to_be_installed} + 10 \text{ MB}$ of disk space needed on the system drive. On Windows Server 2008 systems, the firewall must also be configured to accept "Remote Service Administration" (NP) connections (port 445).
 - On Windows Server 2008 systems, administrative privileges are required to install Data Protector.
 - For viewing online Help on the Data Protector Cell Manager, Internet Explorer 8.0 or later is required. Compatibility view should be disabled for locally stored websites. Mozilla Firefox 17.0.5 (Extended Support Release) or later. Other Web browsers may fulfill this requirement as well, but have not been tested.
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On Linux Systems

The Cell Manager must meet the following minimum requirements:

- 4 GB of total RAM. For recovery of the Internal Database, twice as much total RAM is required. For each parallel backup session 40 MB of RAM are required and 5 - 8 MB per data segment size. This means that, for example, if you want to run 60 parallel backup sessions 3 GB of RAM plus 512 MB for data segments are needed.
- 1.5GB of free disk space + approximately up to 2% of planned data to be backed up (for use by the IDB). If the version of libstdc++ on the system is not 5 (for example libstdc++.so.6 instead of libstdc++.so.5) you need to install the compatibility package compat-2004 or compat-libstdc++.
- To install the Java GUI Server on Red Hat Enterprise Linux 4.0, the libstdc++-4.0.2-8.fc4.x86_64.rpm package is required. If your system does not already contain a 64-bit version of libstdc++.so.5 then you must install it with libstdc++-3.3.3-7.x86_64.rpm.
- Requirements for viewing online Help on the Data Protector Cell Manager are the same as on Data Protector clients.

Installation Server and Client System Requirements

Installation Server Requirements

On Systems Running HP-UX The Installation Server must meet the following minimum requirements:

- 512 MB of available RAM
- 1.5 GB of free disk space
- The inetd daemon must be installed and running

On Systems Running Windows Server The Installation Server must meet the following minimum requirements:

- 512 MB of available RAM
- 2 GB of disk space
- Administrative privileges are required to install Data Protector 8.10. You must also configure a user account whose credentials will be used during remote installation.

On Systems Running Linux The Installation Server must meet the following minimum requirements:

- 512 MB RAM
- 1.5 GB of disk space
- The inetd or xinetd daemon must be installed and running

Deduplication Server Requirements

- It is recommended to have a dedicated Deduplication Server

	CPU speed (GHz) / Number of cores	Physical memory dedicated to the StoreOnce Software	Number of disks (dedicated to the store)
Minimum requirements	2.8 / 2 core	4 GB RAM	1
Recommended requirements	2.8 / 4-6 cores	6 GB RAM	4 or more using RAID 5

Client System Requirements

- On Systems Running UNIX**
- The prerequisite for remote installation of the Data Protector client is the following:
 - The inetd or xinetd (on Linux) daemon must be up and running on the remote client system. The prerequisite for viewing online Help on the Data Protector client is the following:

Disk space and RAM requirements of Data Protector UNIX clients The following table shows the minimum disk space and RAM requirements for the various Data Protector clients:

Client System	RAM (MB)	Disk Space (MB)
Disk Agent	64 (recommended 128)	20
Media Agent	64 (recommended 128)	20
Integration modules	64 (recommended 128)	20
English Documentation & Help	N/A	100

Installation Server and Client System Requirements

NOTE: The figures indicate requirements for the components only. For example the "disk space" figure does not include space allocation for the operating system, page file or other applications.

HP-UX Systems

When installing or upgrading remotely, the minimal available disk space in the folder /tmp should be the same size as the biggest package being installed.

For HP-UX 11.11, the IPv6NCF11i bundle or TOUR/IPv6 support is required to enable the Internet Protocol version 6 (IPv6).

Solaris Systems

When installing a Media Agent, make sure that the following entry is in the file /etc/system: set semsys:seminfo semmni=100

When installing or upgrading remotely, the minimal available disk space in folders /tmp and /var/tmp should be the size of the biggest package being installed.

On Systems Running Windows

The prerequisites for Windows user interface installation and remote installation on the client are:

- On Microsoft Windows XP Professional systems, Service Pack 3 must be installed.
- On Microsoft Windows Server 2003 systems, Service Pack 2 must be installed.
- For viewing the Help, you need a Web browser that is able to run under the same account as the Data Protector GUI process. JavaScript must be enabled in the Web browser. The following Web browsers are supported:
 - Windows Internet Explorer 8.0 or later. Compatibility view should be disabled for locally stored websites.
 - Mozilla Firefox 17.0.5 (Extended Support Release) or later
- Other Web browsers may fulfill this requirement as well, but have not been tested.

The following table presents the minimum available RAM and disk space requirements for different Data Protector Windows client components:

Client System	RAM (MB)	Disk Space (MB)
User Interface	512 ¹	150 ²
Disk Agent	64 (recommended 128)	20
Media Agent	64 (recommended 128)	20
Integration modules	64 (recommended 128)	20
English Documentation & Help	N/A	85

Installation Server and Client System Requirements

NOTES: ¹Memory requirements for the GUI system vary significantly with the number of elements that need to be displayed at a time. This consideration applies to the worst case (like expanding a single directory). You do not need to consider all directories and file names on a client, unless you want to expand all directories while viewing. It has been shown that 2 MB of memory is required per 1,000 elements (directories or file names) to display, plus a base requirement of 50 MB. So the 256 MB of RAM is enough to display the maximum number of file names.

²Regarding the disk space, keep in mind that the page file alone should be able to grow to about 3 times the physical memory.

The figures indicate requirements for the components only. For example the "disk space" figure does not include space allocation for the operating system, page file or other applications.

Newer Windows Operating Systems and Service Packs Windows versions subsequent to Windows XP Service Pack 2 and Windows Server 2003 introduce an improved version of the Internet Connection Firewall (ICF), under a new name as Microsoft Firewall. The firewall is turned on by default. During the installation of a new Data Protector client using the Installation Server, the installation agent is started on the remote computer. The Installation Server then connects to this agent through the Data Protector cell port (by default 5555). However, if Microsoft Firewall is running, the connection cannot be established and the installation fails.

To resolve this, perform one of the following steps:

- Configure Windows Firewall to allow connections through a specific port.
- If the omnirc variable OB2FWPASSTHRU is set on the Installation Server, the installation agent automatically registers itself with Windows Firewall and the installation continues normally.

Java web reporting

To use Data Protector Java web reporting, the following prerequisites must be fulfilled:

A supported Web browser must be installed on the system. A supported Java runtime environment must be installed on the system and enabled in the Web browser

A supported Java runtime environment must be installed on the system and enabled in the Web browser

Microsoft Internet Explorer:

The default web browser security settings prevent webpages from running scripts or using ActiveX controls. To allow the web browser to run scripts and use ActiveX controls in order to enable Data Protector Web Reporting, click Allow blocked content in the Internet Explorer Information bar. To permanently allow blocked content, select Tools > Internet Options > Advanced, locate the Security section and select the option Allow active content to run in files on My Computer.

Local Client Installation

UNIX clients are installed locally using the installation script omnisetup.sh. You can install the client locally from the HP-UX DVD-ROM and import it to the Cell Manager using automated procedure.

For the installation procedure see the HP Data Protector installation and licensing guide.

Installation Server and Client System Requirements

Upgrade

The procedures for upgrading to Data Protector 8.1 from Data Protector 6.2, Data Protector 7.0 and Data Protector 8.0 are documented in the HP Data Protector Installation and Licensing guide. To upgrade from an even earlier version, you first need to upgrade to one of the above mentioned Data Protector versions, and then upgrade to Data Protector 8.1 following the instructions in the HP Data Protector Installation and Licensing Guide.

Requirements for HP Data Protector Services on Windows Server 2003 and Windows Server 2008

HP Data Protector uses four services:

Inet	Backup client service
CRS	Cell Manager service
RDS	Cell Manager Database service
UI-Proxy	User Interface proxy service

By default, Inet and RDS services are running under the Local System account, and CRS and UIProxy services are running under the Administrator account.

You can change the account information for any of these services. However, the following are minimum requirements that must be met by the new accounts:

Service	Resource	Minimum resource permission required by service
RDS	Data _ Protector _ program _ data\db40(WindowsServer2008) Data _ Protector _ home\db40 HKLM\ SOFTWARE\Hewlett-Packard\OpenView\OmniBackII	Full access Read
CRS	Data _ Protector _ program _ data (WindowsServer2008) Data _ Protector _ home HKLM\ SOFTWARE\Hewlett-Packard\OpenView\OmniBackII	Full access Full access
Inet	Backup and Restore Take Ownership	
UIProxy	HKLM\ SOFTWARE\Hewlett-Packard\OpenView\OmniBackII	Read

Files installed in the %SystemRoot%\system32 folder

The following files are placed (depending on the components selected) into %SystemRoot%\system32 folder on Windows systems:

BrandChgUni.dll	This is a resource library. It is used only internally; however, it Also contains the path to registry settings, so it must be located In a well-known location where it can be accessed by Integration libraries.
libarm32.dll	This is a NULL shared library for ARM instrumentation. It may be replaced by third-party monitoring software.
ob2informix.dll	This library is used to integrate with the Informix Server database.
snmpOB2.dll	This library is used to implement system SNMP traps.

Application Platforms

Backup Agents

Windows /XP/2003/2008/Vista/7/2008 R2/2012/2012 R2; Novell OES; HP-UX; Sun Solaris; Linux Red Hat/SUSE/Debian/OEL/CentOS,; IBM AIX; SGI IRIX,; SCO OpenServer,; OpenVMS; MacOS
Additional operating systems supported via:

- NFS/shared disk, CIFS
 - NDMP NAS filer:
 - HP X9000
 - HP NAS 8000
 - HP Storage Server NAS
 - Network Appliance filers
 - EMC Celerra
 - Hitachi BluArc
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Application Agents

- Oracle®, Informix, Sybase, MS SQL Server, MS SQL, MS Exchange, MS SharePoint, MS DPM, SAP, SAP DB/MaxDB, Baan IV, Lotus Notes, Lotus Domino, DB2, Autonomy LiveVault and Autonomy Connector Framework Server
 - Full virtual platform integration with VMware vSphere, ESXi and ESXI server using vStorage API for Data Protection (VADP) and VMware Consolidated Backup VM-level support for Citrix XenServer, HP Integrity Virtual Machine, MS Virtual Server, MS Windows 2008/2008R2 Hyper-V Backup device servers - with robotic control (for control of tape drives and tape library systems, including shared tape libraries)
 - Windows XP/2003/2008/2008 R2, HP-UX, Sun Solaris, Novell NetWare OES, Linux Red Hat/SUSE/Debian, OpenVMS, IBM AIX
 - Granular Recovery agent for SharePoint 2007 & 2010; VMware vSphere, Exchange 2010
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High Availability Applications

- Clusters: RH & SLES Clusters, Microsoft® Cluster Server, HP MC/Serviceguard, VERITAS Cluster, Tru64 Cluster, Novell Netware Cluster, OpenVMS Cluster and HP EFS Clustered Gateway
 - Zero-downtime backup: HP Business Copy XP/P9000 and Continuous Access XP/P9000, HP Business Copy EVA HP Continuous Access EVA, HP SAN/iQ Snapshots, HP 3PAR Virtual Copy, HP P2000 Snapshots, EMC TimeFinder and EMC SRDF, EMC CLARiiON SnapView-Snapshots and NetApp snapshots
 - Instant recovery: HP Disk Array XP/P9000, EVA and P4000
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Management Platforms

Management Systems

- Windows
- HP-UX
- Linux

Manager-of-Managers

- Windows
 - HP-UX
 - Linux
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Application Platforms

Supported Backup Devices Supported Technologies

- Data Protector supports a wide range of HP and non-HP disk and tape devices. For a full list, check the compatibility matrices on hp.com/go/dataprotector.
- DDS, DLT, DLT1, Super DLT, QIC/Travan, Magneto-Optical, Mammoth M2, Eliant, IBM 3590 (Magstar), STK 9840, STK 9940, AIT and LTO Ultrium.
- Supported range of standalone backup devices, auto changers, library systems and silos from Hewlett-Packard, StorageTek, Sony, Dell, Seagate, ADIC, ATL, Spectralogical, Exabyte, Quantum, Breece Hill, Overland Data and others.
- Supported range of disk devices from Hewlett-Packard, EMC, IBM, Quantum, Sepaton, FalconStor, and Exagrid
- One Button Disaster Recovery
- Support for StoreOnce Software Deduplication
- Support for Backup device server (Media Agent) with Deduplication.

Storage Networking

Supported Technologies

- Storage configurations in SAN
- iSCSI (SCSI over TCP/IP), FCIP (FC over IP) and iFCP (Internet FC Protocol)

For the latest platform, integration, cluster and device support information and other details, please consult: <http://www.hp.com/go/dataprotector>

Licenses, Services and Warranties

Distribution Media DVD (physical), download (electronic)

Documentation

Data Protector software manuals are available in PDF format. Install the PDF files during the Data Protector software setup procedure by selecting the English Documentation (Guides, Help) component on Windows or the OB2-DOCS component on UNIX. Once installed, the manuals reside in the <Data_Protector_home>\docs directory on Windows and in the /opt/omni/doc/C/ directory on UNIX. Data Protector software support matrices can be found at the above mentioned locations in the support_matrices sub-directory. You can also find the manuals in PDF format at <http://support.openview.hp.com/selfsolve/manual>

Data Protector software also provides Help topics and context-sensitive (F1) Help for Windows and UNIX platforms. You can access the Help from the top-level directory of any installation DVD-ROM without installing Data Protector:

- Open DP_help.chm (on Windows)
- Unpack the zipped tar file DP_help.tar.gz, and access the Help system through DP_help.htm (on UNIX)

The latest version of the Acrobat Reader software is available at: <http://www.adobe.com>.

Documentation

The HP Data Protector documentation set consists of the following guides:

HP Data Protector Getting Started Guide

This guide provides an overview of the basic Data Protector functionality and is designed to help you get started with the product

HP Data Protector Concepts Guide

This guide describes Data Protector concepts and provides background information on how Data Protector works. It is intended to be used with the task-oriented online Help.

HP Data Protector Installation and Licensing Guide

This guide describes how to install the Data Protector software, taking into account the operating system and architecture of your environment. This guide also gives details on how to upgrade Data Protector, as well as how to obtain the proper licenses for your environment.

HP Data Protector Troubleshooting Guide

This guide describes how to troubleshoot problems you may encounter when using Data Protector.

HP Data Protector Disaster Recovery Guide

This guide describes how to plan, prepare for, test, and perform a disaster recovery.

HP Data Protector Integration Guides

These guides describe how to configure and use Data Protector to back up and restore various databases and applications. They are intended for backup administrators or operators. There are six guides:

- **HP Data Protector Integration Guide for Microsoft Applications: SQL Server, SharePoint Server, and Exchange Server**

This guide describes the integrations of Data Protector with the following Microsoft applications: Microsoft SQL Server, Microsoft SharePoint Server, and Microsoft Exchange Server.

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- **HP Data Protector Integration Guide for Oracle and SAP**
This guide describes the integrations of Data Protector with Oracle Server, SAP R/3, and SAP MaxDB.
- **HP Data Protector Integration Guide for IBM Applications: Informix, DB2, and Lotus Notes/Domino**
This guide describes the integrations of Data Protector with the following IBM applications: Informix Server, IBM DB2 UDB, and Lotus Notes/Domino Server.
- **HP Data Protector Integration Guide for Sybase, Network Node Manager, and Network Data Management Protocol Server**
This guide describes the integrations of Data Protector with Sybase Server, HP Network Node Manager, and Network Data Management Protocol Server.
- **HP Data Protector Integration Guide for Virtualization Environments**
This guide describes the integrations of Data Protector with virtualization environments: VMware Virtual Infrastructure and VMware vSphere, Microsoft Hyper-V, and Citrix XenServer.
- **HP Data Protector Integration Guide for Microsoft Volume Shadow Copy Service**
This guide describes the integration of Data Protector with the Microsoft Volume Shadow Copy Service. This guide also documents application writer specifics.

HP Data Protector Zero Downtime Backup Concepts Guide

This guide describes Data Protector zero downtime backup and instant recovery concepts and provides background information on how Data Protector works in a zero downtime backup environment. It is intended to be used with the task-oriented HP Data Protector Zero Downtime Backup Administrator's Guide and the HP Data Protector Zero Downtime Backup Integration Guide.

HP Data Protector Zero Downtime Backup Administrator's Guide

This guide describes how to configure and use the integration of Data Protector with HP P6000 EVA Disk Array Family, HP P9000 XP Disk Array Family, HP P4000 SAN Solutions, and EMC Symmetrix Remote Data Facility and TimeFinder. It is intended for backup administrators or operators. It covers the zero downtime backup, instant recovery, and the restore of file systems and disk images.

HP Data Protector Zero Downtime Backup Integration Guide

This guide describes how to configure and use Data Protector to perform zero downtime backup, instant recovery, and standard restore of Oracle Server, SAP R/3, Microsoft Exchange Server, and Microsoft SQL Server databases.

HP Data Protector Granular Recovery Extension User Guide for Microsoft Exchange Server

This guide describes how to configure and use the Granular Recovery Extension for Microsoft Exchange Server 2010 environments. Graphical user interface of the Data Protector Granular Recovery Extension for Microsoft Exchange Server is integrated into the Microsoft Management Console. This guide is intended for Microsoft Exchange Server administrators and Data Protector backup administrators.

HP Data Protector Granular Recovery Extension User Guide for Microsoft SharePoint Server

This guide describes how to configure and use the Data Protector Granular Recovery Extension for Microsoft SharePoint Server. The Data Protector Granular Recovery Extension is integrated into Microsoft SharePoint Server Central Installation and Licensing Guide 21 Administration and enables you to recover individual items. This guide is intended for Microsoft SharePoint Server administrators and Data Protector backup administrators.

HP Data Protector Granular Recovery Extension User Guide for VMware vSphere

This guide describes how to configure and use the Data Protector Granular Recovery Extension for VMware vSphere. The Data Protector Granular Recovery Extension is integrated into VMware vCenter Server and enables you to recover individual items. This guide is intended for VMware vCenter Server users and Data

Licenses, Services and Warranties

Protector backup administrators.

HP Data Protector Deduplication White Paper

This technical white paper describes how Data Protector integrates with Backup to Disk devices introducing support for deduplication. By supporting deduplication, several new concepts are added to Data Protector, including a new device type, the Backup to Disk device, and two interface types - the StoreOnce Software deduplication and the StoreOnce Backup System. Backup to Disk devices and deduplication are both discussed in detail in this document.

HP Data Protector Integration with Autonomy IDOL Server White Paper

This technical white paper describes the integration of Data Protector with Autonomy IDOL Server, which introduces e-discovery for enterprise environments where Data Protector is used as the data protection application. The white paper guides you through all usage aspects of the Data Protector IDOL Server integration: installation and configuration, indexing Data Protector backup images, restoring on a basis of full content search, and troubleshooting. Where needed, cross-references point to Data Protector and IDOL Server documentation.

HP Data Protector Integration with Autonomy LiveVault White Paper

This technical white paper describes the integration of Data Protector with Autonomy LiveVault®, which introduces cloud backup for enterprise environments where Data Protector is used as the data protection application. The white paper guides you through all usage aspects of the Data Protector LiveVault integration: installation and configuration, backup policy management, cloud backup, restore of data from the LiveVault cloud to a system in the Data Protector cell (cloud restore) and troubleshooting. Where needed, cross-references point to Data Protector and LiveVault documentation.

HP Data Protector Product Announcements, Software Notes, and References

This guide gives a description of new features of the latest release of HP Data Protector software. It also provides information on installation requirements, required patches, and limitations, as well as known issues and workarounds.

HP Data Protector Command Line Interface Reference

This guide describes the Data Protector command-line interface, command options and their usage as well as providing some basic command-line examples.

Software Licensing

NOTE: Beginning with Data Protector 8.10, new license key passwords will be issued. All old passwords (issued for DP versions prior to 8.10) are no longer valid and not recognized by HP Data Protector 8.10. For newly purchased licenses, you need to select the product version (7.00 or earlier, 8.00 or 8.10) when requesting a password. A password generated for HP Data Protector 8.10 will not work with any previous version of Data Protector. Existing Data Protector customers need to have a valid active support agreement in place, covering the quantity and types of licenses eligible to upgrade their license passwords.

HP Data Protector supports 2 licensing schemes:

- Traditional licensing based on features and backup targets - available for all versions of HP Data Protector software
- Capacity Based Licensing - available with HP Data Protector 7.01 and above

Traditional Licensing

Data Protector supports essentially 3 different backup targets (snapshot, disk and tape). Depending on which one used the customer would license one or all targets as they also can be combined. In addition the

Licenses, Services and Warranties

customer can control performance of the backup by parallelizing use of targets.

The product structure is modular and offers a lot of flexibility. You can order the license that provides the Data Protector software functionality, which best meets the specific requirements of your environment. The Data Protector software 7.0 product structure and licensing consists of three main categories:

- The Starter Packs: A management server (Cell Manager) is supported on HP-UX, Windows and Linux.
- Backup targets such as tape drive licenses, referred to as Drive Extensions, for one drive, advanced backup to disk and Zero Downtime Backup both licensed by capacity
- Data Protector Functional Extensions: The functional extensions licenses are required once per instance (system, library and terabyte) for on-line backup of databases and applications, the Manager-of-Managers functionality, for libraries with more than 60 media slots, encryption, Instant Recovery, NDMP, Granular Recovery Extension,

NOTE: The UNIX product licenses operate on the UNIX, Windows and Novell NetWare platforms, providing the functionality regardless of the platform, while the Windows product licenses operate on the Windows, Novell NetWare and Linux platforms only. Passwords are bound to the Cell Manager and are valid for the entire Data Protector cell. Clients do not require any license for file system or disk image backups.

Capacity Based Licensing

The capacity based product structure is introduced in Data Protector 7 Update 1 (DP 7.01) release. It is based on the volume of primary data protected by HP Data Protector and includes unlimited use of enterprise protection features. The capacity is measured in "Front End Terabytes" or Front End TB. The total amount of Front End Terabytes is defined as the aggregate amount of data from all systems being backed up. Per system it is measured as the largest full (i.e. the total amount of source data protected). The licensing in this product structure is perpetual that covers all existing or new server, storage, apps, etc. The following features are included in the capacity based license:

- Cell Managers & Manager of Managers
- Tape Drives and Libraries
- Online Backup & Granular Recovery Extensions
- Zero Downtime Backup & Instant Recovery
- Advanced Backup to Disk & NDMP

The following licenses are not included in this product structure and must be ordered separately:

- HP Backup Navigator
- Data Protector Management Pack
- Software encryption

Other complimentary products that are sold separately:

- Distribution Media (DVD sets)
- IDOL Server (req. to take advantage of the inclusive IDOL integration)
- HP Cloud Backup "protection plan" to use the integrated Cloud Backup

NOTE: These two product structures cannot be combined on the same Cell Manager or MoM environment. HP Backup Navigator, DP Management Pack and Software encryption are the exception to this as these license can be combined with Data Protector Capacity Based Licensing. Migration from traditional product structure to capacity based product structure is currently not supported. Both licensing models are valid for any size of environment.

Licenses, Services and Warranties

NOTE: For more information on IDOL integration and Integrated Cloud Backup, please contact your HP sales representative.

Additional license authorizations and restrictions applicable to your software product are found at: <http://www.hp.com/go/SWLicensing>

Software 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: <http://h40059.www4.hp.com/warranty/support/tc.php>

HP Software Support

HP Foundation Care 24x7 Service

HP Foundation Care 24x7 connects you to HP 24 hours a day, seven days a week for assistance on resolving issues - hardware onsite response within four hours and software call back within two hours after opening your case. Make HP your first call for hardware or software questions; Collaborative Support is included in all Foundation Care Services for this product and provides troubleshooting assistance on software such as Microsoft Server, Red Hat Linux, VMware and more. Three years' coverage recommended with HP Care Pack Service.

HP Foundation Care Next Business Day Service

HP Foundation Care Next Business Day connects you to HP during business hours for assistance on resolving issues - features next business day hardware onsite response and software call back within two hours after opening your case. Make HP your first call for hardware or software questions; Collaborative Support is included in all Foundation Care Services for this product and provides troubleshooting assistance on software such as Microsoft Server, Red Hat Linux, VMware and more. Three years' coverage recommended with HP Care Pack Service.

PLEASE NOTE: Support is NOT bundled with the software license and must be ordered separately. Orders that do not include a minimum of a 1-year support contract will be rejected.

For more information on these support offerings, please see: www.hp.com/go/hpsupport.

HP Services: Scalable, Flexible and Reliable

The HP QuickStart 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. QuickStart 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 contact your HP sales representative or authorized business partner.

Licenses, Services and Warranties

HP Autonomy Education Autonomy Education is a well-established training department that strives at all times to deliver the best possible learning experience. With a team of experienced trainers and subject matter experts from around the world, our department offers you well designed training courses that range from Infrastructure Technologies, Pan-Enterprise Search, eDiscovery, Content Management, Customer Interactions through to Business Process Management, Records Management and eCommerce.

To learn more about Autonomy's training offerings, including course detail, please visit [Course Training Schedule](https://registration.autonomy.com/autonomy/schedule.php?CType=Archiving+%26+Records+Management&PType=Power) page: <https://registration.autonomy.com/autonomy/schedule.php?CType=Archiving+%26+Records+Management&PType=Power>

HP Financial Services HP Financial Services provides innovative financing and financial asset management programs to help customers cost-effectively acquire, manage, and ultimately retire their HP solutions. For more information on these services, please contact your HP sales representative or visit: www.hp.com/go/hpfinancialservices

Configuration Information

Traditional Licensing

All UNIX Licenses-To-Use (LTU) can be used for Microsoft Windows, NetWare, Linux systems if applicable

Step 1 - Starter Packs

Product Name	Description	Part Number
HP Data Protector Starter Packs	License Only	
	for HP-UX	B6951BA
	for Windows	B6961BA
	for Linux	B6961CA
	E-Delivery for HP-UX	B6951BAE
	E-Delivery for Windows	B6961BAE
	E-Delivery for Linux	B6961CAE
	Media Only (DP 8.1)	
	English	TD586DA
	French	TD586DF
	Japanese	TD586DJ
	Simplified Chinese	TD586DS
	Media Only (DP 8.1)	
	E-Delivery English	TD586DAE
	E-Delivery French	TD586DFE
	E-Delivery Japanese	TD586DJE
	E-Delivery Simplified Chinese	TD586DSE
	Media Only (DP 8.0)	
	English	TD586CA
	French	TD586CF
	Japanese	TD586CJ
	Simplified Chinese	TD586CS
	Media Only (DP 8.0)	
	E-Delivery English	TD586CAE
E-Delivery French	TD586CFE	
E-Delivery Japanese	TD586CJE	
E-Delivery Simplified Chinese	TD586CSE	

NOTE: Please, make sure that latest patches are applied, in order to have access to the latest functionality and level of localization. Patches can be found at <http://support.openview.hp.com/selfsolve/patches>

The Starter Pack license is the foundation of a Data Protector backup environment and is required in all installations. It includes the license-to-use (LTU) for:

- one management server (cell manager) on the specified platform
- unlimited number of backup clients (agents) on any platform
- one drive license (B6951xx contains 1xB6953AA, and B6961xx contains 1xB6963AA)
- built in media management
- libraries up to 60 slots
- System Disaster Recovery options
- sophisticated reporting (in Data Protector GUI and via the web)

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- service-centric management through integrations into HP software. This license is obligatory.

Individual licenses are required for additional drives and additional functionality. All UNIX Starter Pack licenses can also be used as a substitute for a Windows, NetWare, and or Linux Starter Pack.

The base Data Protector media kit consists of 3 DVDs, including HP Data Protector for all platforms, all integrations into other HP software, and electronic manuals.

NOTES:

- In case the Cell Manager is running in a cluster using the same virtual IP address for all nodes in the cluster, only one starter pack is required.
- In case the Cell Manager is running in a virtual machine environment one starter pack is required for each individual Cell Manager IP Address.

Step 2 - Drive and Library Extensions

HP Data Protector Backup Drive	Description	Part Number
	for UNIX, NAS, SAN	B6953AA
E-Delivery	for UNIX, NAS, SAN	B6953AAE
HP Data Protector Backup Drive	Description	Part Number
	for Windows, NetWare, Linux (Intel)	B6963AA
E-Delivery	for Windows, NetWare, Linux (Intel)	B6963AAE

For SAN, UNIX, NAS:

Includes the license-to-use (LTU) for one drive, directly attached to a UNIX, OpenVMS system, a NAS device or used in a SAN.

A drive can be a tape drive, a file device, or Magneto Optical drive.

You need as many licenses as there are drives in use at any point in time. This is typically the total number of configured drives to allow all drives to be used simultaneously.

- Drive licenses cannot be shared between multiple Cells.
- This license can also be used as a substitute for the Windows, NetWare, and Linux license. However, if the drive is not used in a SAN, it is more affordable to use B6963AA.
- This license is required for NAS systems managed via NDMP (for example Network Appliance Filers and EMC Celerra File Servers), or NAS systems requiring a Data Protector proprietary Device Server (Media Agent), (for example HP NAS 8000). NAS systems powered by Windows, NetWare, or standard Linux, which can run a standard Data Protector Device Server (Media Agent), require only the Data Protector drive extensions for Windows, NetWare, Linux (B6963AA).

For Windows, NetWare, Linux:

Includes the license-to-use (LTU) for one drive directly attached to a Windows, NetWare, or Linux (Intel) system. A drive can be a tape drive, a file device, or Magneto Optical drive.

You need as many licenses as there are drives in use at any point in time. This is typically the total number of configured drives to allow all drives to be used simultaneously.

- Drive licenses cannot be shared between multiple Cells.
- In case that multiple systems access the drive in a SAN, the drive extension for UNIX, NAS, SAN (B6953AA) is required. A Fiber Channel point-to-point connection is not considered a SAN.
- This license is valid for drives attached to NAS devices powered by Windows, NetWare or Linux, which can run a standard Data Protector Device Server (Media Agent).

Configuration Information

For supported drives please refer to the Data Protector support matrixes at the following web link:
<http://www.hp.com/go/dataprotector>

HP Data Protector Library extension	Description	Part Number E-Delivery
	with 61-250 slots	B6957BA
	with unlimited slots	B6958BA
	upgrade to unlimited slots library	B6958CA
E-Delivery	with 61-250 slots	B6957BAE
E-Delivery	with unlimited slots	B6958BAE
E-Delivery	upgrade to unlimited slots library	B6958CAE

Includes the license-to-use (LTU) for managing tape libraries with the number of physically available slots within one Data Protector Cell. Required once per library.

- STK silos using ACSLS and GRAU/EMASS library systems using DAS require the unlimited slots license.
- This license is based on the physical slots inside the library, not logical slots. For example Data Protector allows partitioning a physical 120 slots library into two logical 60 slots libraries. Still one 61 - 250 slots library extension is required
- Libraries with the capability to create virtual partitions also require the license based on the number of physically available slots once per physical library.
- In case of library sharing between multiple Cells, the Manager-of-Managers LTU is required for each Cell to license the library across all Cells with one license. Otherwise, one license is required for each Cell.
- For supported libraries please refer to the Data Protector support matrixes under:
<http://www.hp.com/go/dataprotector>

Step 3 - Functional Extensions

HP Data Protector On-line extension	Description	Part Number E-Delivery
	for UNIX	B6955BA
	for Windows, Linux	B6965BA
E-Delivery	for UNIX	B6955BAE
E-Delivery	for Windows, Linux	B6965BAE

Includes the license-to-use (LTU) to perform on-line backup of databases and applications running on the specified platform. Required per server, it does not matter how many databases are running on the system. Even if databases of different types are running on the same system, only one license is required. As a general rule, every system responsible for storing application data to be protected in an online state requires a Data Protector online backup LTU.

- If a system runs multiple partitions, this LTU is required for each partition.
- In a cluster environment, each system participating in the cluster requires a LTU.
- In an Oracle RAC (Real Application Cluster) each cluster node with an installed Application Agent requires one Online Backup LTU.
- Online Backup LTUs are required when using Zero Downtime Backup to protect applications.
- Open file backup and restore using the Windows file system snapshot feature VSS (Volume Shadow copy Service) does not require the Online Backup LTU. However, Online Backup of databases, which

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are not part of the operating system, requires this Online Backup extension. System configuration backup does not require the Online Backup LTU.

- Required for MS Exchange Single Mailbox backup
- Each node with a configured Oracle DataGuard standby database in Data Protector requires this license.
- Not required for HP Network Node Manager Online Backup
- Not required for HP Systems Insight Manager Online Backup.
- For supported databases please refer to the Data Protector support matrixes at: <http://www.hp.com/go/dataprotector>

Online Backup Licensing in Virtual Environments

- vStorage API for data protection (VADP) and VMware ESX/ESXi Server backup require one Online Backup LTU for Windows, Linux license per ESX/ESXi server
NOTE: VCB-host, vCenter Server and the VMware vCloud Director integration doesn't require a separate license as it is covered by the license per ESX host
- Microsoft Hyper-V environments require one Online Backup LTU for Windows, Linux license per physical Hyper-V server.
- Additional Online Backup LTU is highly recommended for each virtual machine that contains application-specific agents.
- For virtual environments, the same licensing requirements apply for array assisted snapshots - see ZDB&IR licensing description for more details.
- Online backup of an application/database on a VMware Virtual Machine requires one license per virtual machine. Previous script-based solutions can continue to be used without additional licensing, but those scripts are no longer supported by HP and need to be maintained by the customer on versions Data Protector 6.1 and beyond.

Online Backup Licensing for Microsoft SharePoint

- For SharePoint environments, an Online Backup LTU is required for each physical system that contains persistent data, such as content databases or index servers.

HP Data Protector Granular Recovery Extension

	Description	Part Number
	for 1-server	TB737AA
E-Delivery	for 1-server	TB737AAE

Includes the license to restore single items from a backup done on a single server with a Data Protector Online Backup extension (in this case the DP Online Backup LTU is required).

For other backup sources like offline backups or 3rd party backup of the GRE supported applications, one GRE license is needed per target server to which items will be recovered with GRE. The GRE license is locked to that server for 1 year; afterwards it can be used for a different server

Granular Recovery Extension Licensing for Microsoft SharePoint

- For SharePoint environments, a Granular Recovery Extension is required for each physical server that contains a content database which backup acts as a source for recovering a single document, a directory or an entire site.

Granular Recovery Extension Licensing for VMware

- For VMware, a Granular Recovery Extension (GRE) license is required for each ESX server that hosts

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one or multiple VM virtual machines during backup and which files are recovered using GRE.

One DP Online Backup LTU is required per system to perform a backup that can be used for Granular Recovery.

Granular Recovery Extension Licensing for Exchange

The Granular Recovery Extension (GRE) for Microsoft Exchange 2010 requires a GRE license for each Exchange server that hosts one or multiple databases that needs to be backed up.

HP Data Protector Encryption extension	Description	Part Number
	for 1-server/workstation	BB618AA
	for 10-servers/workstations	BB618BA
E-Delivery	for 1-server/workstation	BB618AAE
E-Delivery	for 10-servers/workstations	BB618BAE

Includes the license-to-use (LTU) and media to encrypt all backup data of one HP Data Protector client server or workstation with the HP Data Protector AES 256 bit encryption software. Required once for each HP Data Protector client (Agent / Application Agent) with encryption configured.

- Tape drive based encryption is free of charge and does not require this license.
- In a cluster environment, each system participating in the cluster requires a LTU.

HP Data Protector Manager-of-Managers extension	Description	Part Number
	for UNIX	B6956AA
	for Windows	B6966AA
E-Delivery	for UNIX	B6956AAE
E-Delivery	for Windows	B6966AAE

Includes the license-to-use (LTU) for each Data Protector management server (Cell Manager), running on the specified platform, to be part of a Manager-of-Managers environment.

- Required to share tape libraries between multiple Data Protector cells.
- Required in addition to the Cell Manager license.
- Ideal solution for central backup management of branch offices.
- B6956AA (Unix MoM) can also be used for a Windows management server (Cell Manager) if required

HP Data Protector Advanced Backup to Disk extension	Description	Part Number
	for 1 TB	B7038AA
	for 10 TB	B7038BA
	for 100 TB	B7038CA
E-Delivery	for 1 TB	B7038AAE
E-Delivery	for 10 TB	B7038BAE
E-Delivery	for 100 TB	B7038CAE

Includes the license-to-use (LTU) for 1 TB of backup disk storage. Required once per terabyte (TB) usable native capacity of backup disk storage.

- The "Advanced Backup to Disk" license is required to backup to a Data Protector file library and to a Data Protector StoreOnce library, and can be used instead of drive licenses to backup to a Virtual Tape Library.
- Usable native capacity of a HP Data Protector file library is the available size on disk for the file library, as reported by the file system.

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- HP Data Protector synthetic full and virtual full backup: Virtual full backups and the incremental backups to be consolidated into a synthetic / virtual full backup must be stored in the HP Data Protector file library, which requires this license.
- Usable native capacity of a Virtual Tape Library (VTL) is the size on disk of the virtual tape library consumed by all protected HP Data Protector backups as reported by the VTL.
- For each VTL you can choose whether to use the backup to disk or tape drive licensing model. Within one VTL, both concepts cannot be mixed.
- By default, HP Data Protector treats VTL devices as ordinary libraries (such as SCSI II libraries). To utilize the advanced backup to disk licenses, the device must be marked as a VTL during the device configuration. See the online Help index entry: "virtual tape library" for more information.
- If the VTL has a built-in capability to migrate backup data to cheaper disk or tape, the migrated storage capacity must also be fully licensed. No drive and library licenses are required for the tape library exclusively controlled by the VTL, but the used capacity of all tapes in the physical tape library must be licensed. In some cases it may be more cost-effective to use the tape drive licensing model instead (B6953AA and B6963AA). This requirement does not apply when HP Data Protector object copy is used to migrate the backup data to another disk or tape.
 - Licensing for HP VLS Automigration - Automigration is a VLS media copy feature in Data Protector and can free up additional capacity on a VLS device by migrating data. Therefore, licensing for the migrated data is required, and the capacity of the media used for migration needs to be added to the total disk capacity of the VLS. In some cases it may be more cost effective to switch to drive licensing completely, as described above.
 - Licensing for VTL Replication: In cases where Data Protector is actively managing source and target devices in a replication set-up, licensing is required for both devices. In cases where Data Protector is not actively managing the target device, only the source device needs to be licensed. This includes the VLS Echo Copy feature, which is treated as replication.
- If HP Data Protector is using the VTL exclusively, it is recommended to license a quantity matching the capacity of the VTL. HP calls the physical VTL capacity "usable native capacity". Other vendors call it "raw capacity"
- If Advanced Backup to Disk licensing was purchased before July 1st, 2008, HP is fully committed to protect customers' investments. This means you can choose to use this license for the VTL under the previous licensing terms: "Usable native capacity of a VTL is the space occupied by protected backups and protected backup copies and mirrors according to the Data Protector internal database. To keep virtual tape library licensing stress free and simple a compression rate of 2:1 is assumed for VTLs with no extra charge." Please note that using the previous model only makes sense if you do not use compression or deduplication technology. Otherwise, a better value is provided through the new licensing model.
- Due to this size on disk licensing concept, compression rates and deduplication rates do not need to be considered. The RAID configuration also does not need to be considered.
- 1 TB = 1024 GB, 1 GB = 1024 MB, 1 MB = 1024 KB, 1 KB = 1024 bytes
- In case of central licensing with MoM, at minimum 1 TB needs to be assigned to each Cell using the Advanced Backup to Disk functionality.

HP Data Protector Zero Downtime Backup (ZDB) extension	Description	Part Number
	for UNIX 1TB	B7025CA
	for UNIX 10 TB	B7025DA
	for Linux 1 TB	TD588AA
	for Linux 10TB	TD589AA
	for Windows 1TB	TD590AA
	for Windows 10TB	TD591AA
E-Delivery	for UNIX 1TB	B7025CAE

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E-Delivery	for UNIX 10 TB	B7025DAE
E-Delivery	for Linux 1 TB	TD588AAE
E-Delivery	for Linux 10TB	TD589AAE
E-Delivery	for Windows 1TB	TD590AAE
E-Delivery	for Windows 10TB	TD591AAE

Includes the license-to-use (LTU) for one terabyte (TB) of "used primary disk space capacity" of UNIX, Linux, or Windows based backup, utilizing the snapshot capabilities of the disk array supported by Data Protector

"Used primary disk space capacity" is the total capacity of all primary disks on the disk array used by of UNIX, Linux, or Windows systems The primary disks contain the application data and are protected by Data Protector.

In the case of the ZDB for Windows:

- via VSS disk array hardware provider
- or via Data Protector disk array native agents

The total capacity of primary disks represents the total true usable capacity of these disks; independent of the total size of the application data. Data Protector does not require licenses for the capacity consumed by the secondary volumes, mirrors, and snapshots that are used for data protection.

Used capacity differs from raw capacity in that RAID overhead is excluded. This means the RAID configuration does not need to be considered.

Please, be aware that the ZDB licenses for UNIX or Linux can also be used for Linux and Windows systems

NOTE: A Data Protector Online Backup LTU (B6955BA, B6965BA) is additionally required per system to protect all applications using ZDB.

For supported applications please refer to the Data Protector support matrixes available at:

www.hp.com/go/dataprotector

HP Data Protector Instant Recovery extension

	Description	Part Number
	for UNIX 1TB	B7028AA
	for UNIX 10 TB	B7028DA
	for Linux 1 TB	TD592AA
	for Linux 10TB	TD593AA
	for Windows 1TB	TD594AA
	for Windows 10TB	TD595AA
E-Delivery	for UNIX 1TB	B7028AAE
E-Delivery	for UNIX 10 TB	B7028DAE
E-Delivery	for Linux 1 TB	TD592AAE
E-Delivery	for Linux 10TB	TD593AAE
E-Delivery	for Windows 1TB	TD594AAE
E-Delivery	for Windows 10TB	TD595AAE

Includes the license-to-use (LTU) for one terabyte (TB) of "used primary disk space capacity" of UNIX, Linux, or Windows based backup utilizing the snapshot capabilities of the disk array supported by Data Protector.

"Used primary disk space capacity" is the total capacity of all primary disks on the disk array that are used

Configuration Information

by UNIX, Linux, or Windows systems. The primary disks contain the application data and are protected by Data Protector

In the case of the IR for Windows:

- via VSS disk array hardware provider
- or via Data Protector disk array native agents

The total capacity of primary disks represents the total true usable capacity of these disks; independent of the total size of the application data. Data Protector does not require licenses for the capacity consumed by the secondary volumes, mirrors, and snapshots that are used for data protection.

Used capacity differs from raw capacity in that RAID overhead is excluded. This means the RAID configuration does not need to be considered.

Please, be aware that these IR licenses for UNIX can also be used for Linux and Windows systems.

NOTE: Requires an equivalent licensing of Zero Downtime Backup.

HP Data Protector Direct Backup using NDMP	Description	Part Number E-Delivery
	Direct Backup for NDMP, 1TB LTU	B7022BA
	Direct Backup for NDMP, 10TB LTU	B7022DA
	Direct Backup for NDMP, 100TB LTU	TD186AA
E-Delivery	Direct Backup for NDMP, 1TB LTU	B7022BAE
E-Delivery	Direct Backup for NDMP, 10TB LTU	B7022DAE
E-Delivery	Direct Backup for NDMP, 100TB LTU	TD186AAE
Includes the license-to-use (LTU) to backup 1 TB, 10 TB or 100 TB of 1 NDMP Server. Required once per terabyte (TB) used disk space, for each file server being backed up via NDMP (e.g. Network Appliance Filers or EMC Celerra File Servers).		

- Used disk space capacity is the total capacity of all volumes of the file server being backed up via NDMP. This amount represents the total usable capacity of these volumes, and matches with their configured LDEV sizes

HP Data Protector Media Operations	Description	Part Number
	Entry Level	B7100AA
	Enterprise	B7101AA
	Unlimited media	B7102AA
	Media	TD587BA
E-Delivery	Entry Level	B7100AAE
E-Delivery	Enterprise	B7101AAE
E-Delivery	Unlimited media	B7102AAE
E-Delivery	Media	TD587BAE

NOTE: HP Data Protector Media Operations is only available for DP version 7.0x.

The Entry Level includes the license-to-use (LTU) for 2000 media, one management server and unlimited clients.

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The Enterprise includes the license-to-use (LTU) for 10 000 media, one management server and unlimited clients.

The unlimited includes the license-to-use (LTU) for unlimited media, one management server and unlimited clients.

Media refers to the total number of tape media to be tracked in the Data Protector Media Operations internal database. The entry level and enterprise level licenses can be used in any combination to match the customer's total number of tape media to be tracked.

- Data Protector Media Operations is not included in the Data Protector starter packs DVDs and has to be ordered separately via TD587BA or TD587BAE.

NOTE: Media Operations doesn't work with DP 8.x versions. This applies to DP 7.0.x and prior versions only.

Single Server Editions

HP Data Protector, Single Server Edition	Description	Part Number E-Delivery
	LTU Only	
	for HP-UX	B7020BA
	for Windows	B7030BA
E-Delivery	for HP-UX	B7020BAE
E-Delivery	for Windows	B7030BAE
	Migration To Starter Pack	
	for HP-UX	B7021AA
	for Windows	B7031AA
E-Delivery	for HP-UX	B7021AAE
E-Delivery	for Windows	B7031AAE
	Media Only (DP 8.1)	
	English	TD586DA
	Media Only (DP 8.1)	
E-Delivery	English	TD586DAE
	Media Only (DP 8.0)	
	English	TD586CA
	French	TD586CF
	Japanese	TD586CJ
	Simplified Chinese	TD586CS
	Media Only (DP 8.0)	
E-Delivery	English	TD586CAE
	French	TD586CFE
	Japanese	TD586CJE
	Simplified Chinese	TD586CSE

Includes the license to backup one single server on the specified platform with an unlimited number of UNIX and/or Windows workstations, one backup drive; and the ability to manage one autochanger/library with up to 10 slots.

The Single Server Edition for Windows can only manage Windows workstations

Configuration Information

To obtain the following functionality the Single Server Edition has to be migrated to the Starter Pack via the migration LTU:

- additional backup clients (agents) on any platform
- additional backup drives
- the ability to manage autoloaders/libraries with more than 10 slots
- systems disaster recovery
- sophisticated reporting (in the Data Protector GUI and via the web)
- SAN support (with the management server for HP-UX)
- service-centric management through integrations into HP Software

Once migrated, additional drives as well as further additional functionality can be ordered via separate LTUs.

To order the migration LTU, a single server edition LTU is required.

NOTE: An upgrade from Single Server edition to Capacity Based license model is not supported.

HP Data Protector Capacity Based Licensing

Capacity Tiers	Description	Part Number E-Delivery
	LTU Only	
	HP DP per TB, 1-9 TB LTU	TF521AA
	DP per TB, 10-49TB LTU	TF542AA
	DP per TB, 50-99 TB LTU	TF543AA
	DP per TB, 100-249 TB LTU	TF544AA
	DP per TB, 250-499 TB LTU	TF558AA
	DP per TB, 500-1000 TB LTU	TF561AA
	DP per TB, >1000TB	TF582AA
E-Delivery	DP per TB, 1-9 TB LTU	TF521AAE
E-Delivery	DP per TB, 10-49TB LTU	TF542AAE
E-Delivery	DP per TB, 50-99 TB LTU	TF543AAE
E-Delivery	DP per TB, 100-249 TB LTU	TF544AAE
E-Delivery	DP per TB, 250-499 TB LTU	TF558AAE
E-Delivery	DP per TB, 500TB-1 PB LTU	TF561AAE
E-Delivery	DP per TB, >1PB	TF582AAE
	Media Only (DP 8.1)	
	English	TD586DA
	French	TD586DF
	Japanese	TD586DJ
	Simplified Chinese	TD586DS
	Media Only (DP 8.1)	
	English	TD586DAE
	French	TD586DFE
	Japanese	TD586DJE
	Simplified Chinese	TD586DSE
	Media Only (DP 8.0)	

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English	TD586CA
French	TD586CF
Japanese	TD586CJ
Simplified Chinese	TD586CS
Media Only (DP 8.0)	
English	TD586CAE
French	TD586CFE
Japanese	TD586CJE
Simplified Chinese	TD586CSE

It is based on the volume of primary data protected by HP Data Protector and includes unlimited use of enterprise protection features. The capacity is measured in "Front End Terabytes" or Front End TB. The total amount of Front End Terabytes is defined as the aggregate amount of data from all systems being backed up. Per system it is measured as the largest full (i.e. the total amount of source data protected). For example:

- For a full & incremental backup concept, only full are considered
- For an incremental forever, a "synthetic" full is taken as base

NOTE: 1 PB = 1024 TB, 1 TB = 1024 GB, 1 GB = 1024 MB, 1 MB = 1024 KB, 1 KB = 1024 bytes

The capacity purchase tier in Data Protector capacity based license scheme is determined by the total TB of DP capacity license owned by the customer. Here is an example scenario where a customer purchases an 8 TB of DP capacity first and then makes subsequent purchases of a 5TB and a 50 TB of DP capacity. Here is what each order will include:

- An initial purchase of an 8 TB capacity will be at the HP DP per TB, 1-9 TB tier: 8X TF521AA
- The second purchase of 5 more TB will be at HP DP per TB, 10-49 TB tier: 5X TF542AA
- The next purchase of 50 TB will be HP DP per TB, 50-99 TB tier: 50X TF543AA

The capacity based license includes the following features of HP Data Protector software:

- Cell Managers & Manager of Managers
- Tape Drives and Libraries
- Online Backup & Granular Recovery Extensions
- Zero Downtime Backup & Instant Recovery
- Advanced Backup to Disk & NDMP

NOTE: Software encryption is NOT included and must be ordered separately

The complimentary products that are sold separately are:

- Distribution Media (DVD sets)
- Media Operations*
- IDOL Server (req. to take advantage of the inclusive IDOL integration)
- HP Cloud Backup "protection plan" to use the integrated Cloud Backup
- HP Backup Navigator
- Data Protector Management Pack

*HP Data Protector Media Operations is only available for DP version 7.0x.

NOTE: For more information on IDOL integration and Integrated Cloud Backup, please contact your HP sales representative.

Here are some example scenarios for Capacity Based licensing:

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- If a customer has 200 TB of data to protect and backs up to a dedupe store that only uses 20 TB they would still need 200 TB capacity license
- If a customer has 100 TB of data but only protects 10 TB of this data they would only need a 10 TB capacity license
- If a customer backs up the same 10 TB multiple times, only a 10 TB capacity license is needed.

HP Data Protector Complimentary Products

HP Backup Navigator	Description	Part Number E-Delivery
	LTU Only	
	HP Backup Navigator per TB, 1-9TB SW LTU	A8G54AA
	HP Backup Navigator per TB, 10-49TB SW LTU	A8G55AA
	HP Backup Navigator per TB, 50-99TB SW LTU	A8G56AA
	HP Backup Navigator per TB, 100-249TB SW LTU	A8G57AA
	HP Backup Navigator per TB, 250-499TB SW LTU	A8G58AA
	HP Backup Navigator per TB, 500-1000TB SW LTU	A8G59AA
	HP Backup Navigator 1PB+ SW LTU	A8G60AA
E-Delivery	HP Backup Navigator per TB, 1-9TB SW E-LTU	A8G54AAE
E-Delivery	HP Backup Navigator per TB, 10-49TB SW E-LTU	A8G55AAE
E-Delivery	HP Backup Navigator per TB, 50-99TB SW E-LTU	A8G56AAE
E-Delivery	HP Backup Navigator per TB, 100-249TB SW E-LTU	A8G57AAE
E-Delivery	HP Backup Navigator per TB, 250-499TB SW E-LTU	A8G58AAE
E-Delivery	HP Backup Navigator per TB, 500-1000TB SW E-LTU	A8G59AAE
E-Delivery	HP Backup Navigator 1PB+ SW E-LTU	A8G60AAE
	Media Only (Backup Navigator 8.0)	
	English	H7P25AA
	Media Only (Backup Navigator 8.0)	
	English	H7P25AAE

This license is valid for use with either Traditional or Capacity based Data Protector implementations. One LTU is required per Data Protector Cell Manager. Includes integration with Microsoft System Center Operations Manager.

DP Management Pack	Description	Part Number
	LTU Only	
	HP DP Management Pack SW LTU	H7P27AA
	HP DP Management Pack SW E-LTU	H7P27AAE
	Media Only (DP Management Pack 8.0)	
	English	H7P26AA
	Media Only (DP Management Pack 8.0)	
	English	H7P26AAE

This license is valid for use with either Traditional or Capacity based Data Protector implementations. One LTU is required per Data Protector Cell Manager. Includes integration with Microsoft System Center Operations Manager.

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For more information on HP Data Protector software

- General web page: <http://www.hp.com/go/dataprotector> (**NOTE:** The latest HP Data Protector software support matrices can be found by clicking "Support Matrices" from this page)
 - Direct link to QuickSpecs with detailed product specifications, ordering information and more: <http://www.hp.com/go/quickspecs>
 - To learn more about HP's Information solutions, visit www.hp.com/go/im
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