*Overview*

## Introduction

HP Data Protector software simplifies application protection in virtual and physical environments through unified recovery and advanced automation. Global, one-touch backup configuration and a wide range of disk-based recovery options across HP and non-HP arrays, including fully-automated application recovery, help you meet any SLA for up to 70% less total cost of ownership than competitive backup software solutions.

More than 41,000 customers around the world, and nearly half of the Global 500, rely on HP Data Protector software to protect their critical applications and data. Data Protector is a key component of the HP Information Management solution portfolio, which dramatically simplifies the management and governance of information for today's modern enterprise organization.

## What's New

**Extending the Power of HP - down-to-the-second recovery of application for HP P4000 arrays.**
Only HP Data Protector software can recover virtual server applications and data to any point in time - down-to-the-second - from a centralized console without scripting. Data Protector 6.2 extends this functionality to the P4000. Together, Data Protector and P4000 achieve a highly cost-effective enterprise recovery solution ideal for virtual server deployments of applications such as Microsoft SharePoint, Microsoft Exchange and SQL Server.

Data Protector allows backup administrators to select the point in time to which they'd like to recover into the Data Protector console. Data Protector accesses the application transaction log (where all of the application's transactions are recorded before they're processes and/or written to data files) and fills in the data gaps between snapshots. Data Protector then synchronizes the application with the data and restarts the application. This functionality is possible with any Data Protector recovery solution whether from snapshot, disk or tape.

**Extending simplified snapshot functionality to non-HP arrays such as EMC CLARiiON and Network Appliance**
Data Protector Zero Downtime Backup snapshot support has been extended to non-HP arrays through VSS integration. Global one-touch protection ensures snapshot configurations - as well as all backup methods - are automatically extended to new virtual machines, Microsoft databases, and Oracle databases as they're brought online. One click in the Data Protector console and Data Protector will automatically apply the chosen backup method to new VMs and databases. This level of automation extends to physical environments as well.

**Reducing the burden of single item recovery on the backup administrator.**
Data Protector Granular Recovery Extension empowers SharePoint and VMware vSphere administrators to recover single items directly from the application administrator's console, without asking for assistance from the backup administrator.
Data Protector allows application administrators to recover single items from Data Protector disk or tape backups - they don't need to know or use Data Protector, nor do they need to contact the backup administrator. For SharePoint environments, GRE allows application administrators to recover single items from ANY 3rd party snapshots.

**NEW Data Protector Reporter software - sophisticated operational analysis, SLA compliance reporting across multi-site distributed geographies.**
Data Protector software includes robust reporting capabilities, including a notification function which allows customers to forward events to HP or 3rd-party reporting or management tools such as HP Storage Essentials and IBM Tivoli. For customers who require the most advanced reporting capabilities, HP provides Data Protector Reporter software - which delivers enterprise reporting, designed specifically for Data Protector customers. HP Data Protector Reporter software is customer-installable software which delivers centralized, automated reporting to optimize operations and infrastructure - and realize up to 30% savings. It features a powerful reporting engine that drives global, multi-site backup and restore analysis. Data Protector Reporter features 35+ out-of-the-box reports including SLA and performance reporting. The optional current licensed module provides enhanced powerful customized ad-hoc query and analysis flexible reporting. For more information, please download the Data Protector Reporter QuickSpecs on hp.com/go/dataprotector.

**Enhanced single-pass disaster recovery functionality - for no additional cost.**
Data Protector 6.2 introduces new disaster recovery functionality which is included in the cost of Data Protector. Unlike some backup software solutions that require you to keep a separate image backup from which to initiate recovery, Data Protector

*Overview*

provides "single-pass DR" - which enables customers to create a disaster recovery image from any existing full backup. You can restore from physical-to-virtual and virtual-to-physical servers across dissimilar hardware. In addition, once the backup administrator initiates the disaster recovery process, Data Protector automatically re-builds the system and the partitioning. Data Protector 6.2 supports both Linux and Windows operating systems - for specific support please check the compatibility matrix on hp.com/go/dataprotector.

In addition, Data Protector DR functionality is especially useful in remote and branch office environments. Data Protector is fully replication aware, and provides a single management console from which to oversee deduplication-enabled replication between local or geographically distributed sites. When Data Protector performs a backup in the remote office, the backup with the DR image can be replicated to the central data center, In the event of an outage, the DR image can be prepared and delivered to the ROBO site via FTP site or by shipping a USB drive for fast recovery.

**IPv6 and NDMP**
Data Protector 6.2 is fully IPv6 compliant. Data Protector IPv6 support is backward compatible for IPv4 environments. In addition, Data Protector 6.2 also provides NDMP snapmirror to tape support, which provides efficient backup of large files.

*Hardware Support and Software Pre-Requisites*

## Hardware Support

- Broad coverage of HP-UX, Windows, Solaris, Tru64, OpenVMS, NetWare, Linux, AIX, and other operating environments
- HP XP/EVA, and EMC Symmetrix disk array support for ZDB/IR
- Backup to disk supports any storage that the server's operating system supports
- HP Tape libraries, StorageTek, ADIC, IBM etc.
- For detailed information on HP Data Protector support matrices please visit: http://www.hp.com/go/dataprotector

## 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 (PA-RISC) - 11.11, 11.23, 11.31 and HP-UX (IA64) - 11.23, 11.31**

The Cell Manager must meet the following minimum requirements:

- The Soft File Limit per Process on the Cell Manager should be at least 1024.
- 256 MB RAM (512 MB recommended)
- 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.
- 240 MB of disk space + approximately 2% of planned data to be backed up (for use by the IDB).
- It is recommended to modify the kernel parameters as follows:
  - Set maxdsiz (Max Data Segment Size) or maxdsiz_64 (for 64-bit systems) to at least 134217728 bytes (128 MB).
  - Set semmnu (Number of Semaphore Undo Structures) to at least 256.
  - After committing these changes, recompile the kernel and reboot the machine.

**On Systems Running Solaris 8/9/10**

The Cell Manager must meet the following minimum requirements:

- 256 MB of RAM (512 MB recommended)
- 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 of data segments are needed.
- 300 - 425 MB of disk space + approximately 2% of planned data to be backed up (for use by the IDB)
- The following values of kernel parameters are recommended: SEMMNI (maximum number of semaphore sets in the entire system) = 100 and SEMMNS (maximum semaphores on the system) = 256. A system restart is necessary for kernel changes to take effect.
- The requirements for viewing online Help on the Data Protector Cell Manager are the same as on Data Protector clients.
- For Java GUI Client, Java Runtime Environment (JRE) 1.5.0_06 or newer (for example, 1.5.0_07) is required.

*Hardware Support and Software Pre-Requisites*

**On Systems Running Windows XP**

The Cell Manager must meet the following minimum requirements:

- 256 MB RAM (512 MB recommended).
- For each parallel backup session 40 MB of RAM are required. For example, if you want to run 60 parallel backup sessions 3 GB of RAM are needed.
- Windows 2000, Service Pack 3 or later
- Windows XP Professional, Service Pack 1 must be installed
- 190 MB of disk space + approximately 2% of planned data to be backed up (for use by the IDB)
- 2 <size of the biggest package to be installed> + 5MB of disk space needed on system drive
- For viewing online help on the Data Protector Cell Manager, Microsoft Internet Explorer 6.0 or newer is required.
- For Java GUI Client, Java Runtime Environment (JRE) 1.5.0. or newer (for example, 1.5.0_07) is required.

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**On Systems Running Windows Server 2003 (32-bit) and Windows 2003/2008 & 2008-R2 (64-bit x86_64)**

The Cell Manager must meet the following minimum requirements:

- 256 MB RAM (512 MB recommended).
- Each parallel backup session requires 40 MB of RAM. For example, 60 parallel backup sessions requires 3 GB of RAM.
- 190 MB of disk space + approximately 2% of planned data to be backed up (for use by the IDB)
- 2 <size of the biggest package to be installed> + 5MB of disk space needed on 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 A.06.2.
- For viewing online Help on the Data Protector Cell Manager, Microsoft Internet Explorer 6.0 or newer version is required.
- For the Java GUI Client on Windows Server 2003 systems, Java Runtime Environment (JRE) 1.5.0_06 or newer update (for example, 1.5.0_07) is required.
- For the Java GUI Client on Windows Server 2008 systems, BEAJRockit 5.0 1.5.0_06 or newer update (for example, 1.5.0_07) is required.

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**On Linux Systems**

The Cell Manager must meet the following minimum requirements:

- 256 MB RAM (512 MB recommended).
- 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.
- 300 - 425 MB of disk space + approximately 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 yours 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.
- To run the Java GUI Server on SuSE Linux Enterprise Server 9 (64-bit), the package compat-libstdc++-lsb-4 .0.2_20050901-0.4. x86_64 . rpm is required.
- Requirements for viewing online Help on the Data Protector Cell Manager are the same as on Data Protector clients.
- For Java GUI Client, Java Runtime Environment (JRE) 1.5.0_06 or newer (for example, 1.5.0_07) is required.

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*Hardware Support and Software Pre-Requisites*

**Operating Systems supported by HP AutoPass**

The following Windows operating systems are supported by HP AutoPass:

- Windows 2000
- Windows XP
- Windows Server 2003 (32-bit)
- Windows Vista (32-bit)
- Windows Server 2008 (32-bit)

The following HP-UX operating systems are supported by HP AutoPass:

- HP-UX 11.00, HP-UX 11.11 (PA-RISC)
- HP-UX 11.23, HP-UX 11.31 (PA-RISC, Itanium)

Solaris and Linux operating systems are not supported.

## Installation Server Requirements

**On Systems Running HP-UX**

The Installation Server must meet the following minimum requirements:

- 64 MB of available RAM
- 750 MB of free disk space

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**On Systems Running Solaris 8/9/10**

The Installation Server must meet the following minimum requirements:

- 64 MB of available RAM
- 750 MB of disk space

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**On Systems Running Windows XP**

The Installation Server must meet the following minimum requirements:

- 64 MB of available RAM 250 MB of disk space
- Windows XP Professional, Service Pack 1
- Microsoft Internet Explorer 6.0 or later

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**On Systems Running Windows 2003 or Windows Server 2008 & 2008 R2**

The Installation Server must meet the following minimum requirements:

- 64 MB of available RAM
- 250 MB of disk space
- On Windows Server 2008 systems, administrative privileges are required to install Data Protector A.06.2.
- On Windows Server 2008 systems, you must configure the user whose credentials will be used during remote installation.
- For viewing online Help on the Data Protector Installation Server, Microsoft Internet Explorer 6.0 or newer version is required.
- For the Java GUI Client on Windows Server 2003 systems, Java Runtime Environment (JRE) 1.5.0_06 or newer (for example, 1.5.0_07) is required.
- For the Java GUI Client on Windows Server 2008 systems, BEA JRockit 5.0 1.5_06 or newer (for example, 1.5_07) is required.

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**On Systems Running Linux**

The Installation Server must meet the following minimum requirements:

- 64 MB RAM
- 800 MB of disk space

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## Client System Requirements

**On Systems Running UNIX**

- The prerequisite for remote installation of the Data Protector client is the following:
- The inetd 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:
- A web browser that is able to run under the same account as Data Protector must be installed on the client system:
  - On HP-UX, the Mozilla web browser is supported. HP recommends using Mozilla 1.7, but you can also use any other Mozilla version that is officially supported on this platform. For a list of supported Mozilla versions and their installation packages, see the web site http://www.hp.com/products1/unix/ java/mozilla/index.html
  - On Solaris, Mozilla 1.7, Netscape 7.0, and Netscape Navigator 4.7x are supported. HP recommends using Mozilla 1.7. You can download it at http://www.sun.com/software/solaris/browser/index.xml and http://www.mozilla.org/releases/#1.7.12
  - On Linux, Mozilla 1.7 is supported. You can download it at http://www.mozilla.org/releases/#1.7.12
  - For Java GUI Client, Java Runtime Environment (JRE) 1.5.0_06 or newer update (for example, 1.5.0_07) is required.

**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) |
|---|---|---|
| Java GUI | 512 (1,024 recommended) | 40 (60 recommended) |
| Disk Agent | 64 (recommended 128) | 10 |
| Media Agent | 64 (recommended 128) | 20 |
| Integration modules | 64 (recommended 128) | 20 |
| English Documentation & Help | N/A | 80 |

**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.

**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.

The Solaris installation DVD-ROM is in the pkg stream format, which is not recognized by the standard tar utility. That is why the HP-UX, and not the Solaris installation DVD-ROM must be used for the local installation/upgrade of Solaris clients.

*Installation Server and Client System Requirements*

**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 1 must be installed.
- On Microsoft Windows 2003 systems, Service Pack 1 must be installed.
- For viewing online help on the Data Protector client, Microsoft Internet Explorer 6.0 or newer version is required.
- For Java GUI Client, Java Runtime Environment (JRE) 1.5.0_06 or newer (for example, 1.5.0_07) is required.

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) |
|---|---|---|
| Original GUI | 256[1] | 150[2] |
| Java GUI[3] | 512 (1,000 recommended) | 40 (60 recommended) |
| Disk Agent | 64 (recommended 128) | 10 |
| Media Agent | 64 (recommended 128) | 20 |
| Integration modules | 64 (recommended 128) | 20 |
| English Documentation & Help | N/A | 85 |

**NOTES:**

[1]Memory 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.

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

[3]In addition to RAM and disk space requirements, Java GUI requires a faster processor than the default GUI: at least 1 GHz Pentium III or equivalent is required, while a 2.6 GHz Pentium IV or equivalent is recommended.

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 XP Service Pack 2, Windows Server 2003 Service Pack 1, Windows Vista, and Windows Server 2008 and 2008 R2 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.

*Installation Server and Client System Requirements*

**Java web reporting**

Java Runtime Environment (JRE) 1.5.0_06 or newer (for example, 1.5.0_07) must be installed on the system and enabled in the Web browser. The supported browsers are Netscape Navigator 4.7.x, Netscape 7.x, Mozilla 1.7 and Microsoft Internet Explorer 6.0 or later.

You can download a JRE plug-in for Internet Explorer and Netscape Navigator browsers at: http://java.sun.com/products/plugin/.

**Novell NetWare**

- Any Novell NetWare system that is part of a Data Protector cell must have TCP/IP version 3.1 or later installed.
- Novell Netware 6.5 must have the Support pack 1 or later installed.

**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 or Installation Server installation CD-ROM and import it to the Cell Manager using automated procedure.

For the installation procedure see the HP Data Protector installation and licensing guide.
MPE/iX, Novell NetWare, and HP OpenVMS clients can be installed locally. Remote installation is not supported.

**Upgrade**

The procedures for upgrading to Data Protector A.06.2 from Data Protector A.05.10, A.05.50, A.06.00, A.06.10, and A.06.11 are documented in the HP Data Protector Installation and Licensing guide.

To upgrade from an even earlier version, you need to first upgrade to Data Protector A.05.10, and then upgrade to Data Protector A.06.2 following the procedures in the HP Data Protector installation and licensing guide.

**Requirements for HP Data Protector Services on Windows Server 2003**

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<br>HKLM\ SOFTWARE\Hewlett-Packard\OpenView\OmniBackII | Full access<br>Read |
| CRS | Data _ Protector _ program _ data (WindowsServer2008) Data _ Protector _ home<br>HKLM\ SOFTWARE\Hewlett-Packard\OpenView\OmniBackII | Full access<br>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; Novell NetWare/OES; HP-UX; Sun Solaris; Linux Red Hat/SUSE/Debian,; IBM AIX; SGI IRIX;; SCO OpenServer, SCO Unixware; HP Tru64 UNIX; 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

**Application Agents**

- Oracle®, Informix, Sybase, MS SQL Server, MS SQL, MS Exchange, SAP, SAP DB/MaxDB, Baan IV, Lotus Notes, Lotus Domino, Solid Database, DB2
- Full virtual platform integration with VMware vSphere, ESXi and ESXI server using vStorage API for Data Protection (VADP) and VMware Consolidated BackupVM-level support for Citrix XenServer, HP Integrity Virtual Machine, MS Virtual Server, MS Windows 2008 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
- Backup device servers-without robotic control (for direct connection to tape drives-can be used in shared tape libraries where library robotics are controlled by another media agent described above)
- IBM AIX, SCO OpenServer
- Granular Recovery agent for SharePoint 2007 & 2010; VMware vSphere

**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 andP4000

**Management Platforms**

**Management Systems**

- Windows
- HP-UX
- Sun Solaris
- Linux

**Manager-of-Managers**

- Windows
- HP-UX
- Sun Solaris
- Linux

*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.<br>• DDS, DLT, DLT1, Super DLT, QIC/Travan, Magneto-Optical, Mammoth M2, Eliant, IBM 3590 (Magstar), STK 9840, STK 9940, AIT and LTO Ultrium.<br>• 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.<br>• Supported range of disk devices from Hewlett-Packard, EMC, IBM, Quantum, Sepaton, FalconSttor, and Exagrid<br>• One Button Disaster Recovery |
| **Storage Networking** | **Supported Technologies** | • Storage configurations in SAN<br>• 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

**Distribution Media** DVD

**Documentation**

Data Protector software manuals are available and in PDF format. Install the PDF files during the Data Protector software setup procedure by selecting the User Interface/User 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://h20230.www2.hp.com/selfsolve/manuals

Additionally, the following file is provided:
A spreadsheet to estimate the size of the IDB, IDB_capacity_planning.xls
The latest version of the Acrobat Reader software is available at: http://www.adobe.com.

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

**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.
- **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.20 About this guide
- **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 Integration Guide for HP Operations Manager for UNIX**
This guide describes how to monitor and manage the health and performance of the Data Protector environment with HP Operations Manager and HP Service Navigator on UNIX.

**HP Data Protector Integration Guide for HP Operations Manager for Windows**
This guide describes how to monitor and manage the health and performance of the Data Protector environment with HP Operations Manager on Windows.

**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 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 Protector backup administrators.

**HP Data Protector Media Operations User Guide**
This guide provides information for network administrators responsible for maintaining and backing up systems on the tracking and management of offline storage media. It describes the tasks of installing and configuring the application, performing daily media operations and producing reports.

**HP Data Protector Product Announcements, Software Notes, and References**
This guide gives a description of new features of HP Data Protector 6.20. It also provides information on installation requirements, required patches, and limitations, as well as known issues and workarounds.

**HP Data Protector Product Announcements, Software Notes, and References for Integrations t HP Operations Manager**
This guide fulfills a similar function for the HP Operations Manager integration.

**HP Data Protector Media Operations Product Announcements, Software Notes, and Reference**
This guide fulfills a similar function for Media Operations.

**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**

The Data Protector software 6.2 product structure is based on performance.
The more drive licenses that are installed, the more tape drives can be used for backup in parallel, thus the faster the backup will be performed. 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 6.2 product structure and licensing consists of three main categories:

- The Starter Packs: A management server (Cell Manager) is supported on HP-UX, Windows, Solaris and Linux.
- Additional tape drive licenses, referred to as Drive Extensions, for one drive.
- 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, for open file backup, media operations, encryption, advanced backup to disk, Instant Recovery, NDMP, Granular Recovery Extension, and Zero Downtime Backup.

**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.

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

- HP Software Support 9x5
  - 24x7 web-based intelligent response
  - Software patches, updates and upgrades
  - Phone-in 9x5
- HP Software Support 24x7
  - Same as above but with 24x7 phone-in assistance
  - Rapid call-back for the most critical (Severity 1) problems

**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/hpsoftwaresupport.

*Licenses, Services and Warranties*

**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.

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**HP Software Education Services**

HP Software Education Services is an innovative learning organization producing world-class training and delivering it globally via 100+ HP training centers, customer sites and online virtual courses. We transfer knowledge to IT professionals using the most appropriate delivery options and curriculums that fit their business needs, enabling them to extract greater sustained value from their HP software investments. Our Certified Instructors bring experience in industry and product support, ensuring end users can bridge the gap between technical expertise and effective real-life use of technology. HP Software Education Services produce amazing outcomes by bringing innovation to life in the workplace.

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

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**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

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 Sun Solaris | B6951CA |
| | | for Windows | B6961BA |
| | | for Linux | B6961CA |
| | E-Delivery | for HP-UX | B6951BAE |
| | E-Delivery | for Sun Solaris | B6951CAE |
| | E-Delivery | for Windows | B6961BAE |
| | E-Delivery | for Linux | B6961CAE |
| | | **Media Only** | |
| | | English | TD586AA |
| | | Japanese | TD586AF |
| | | French | TD586AJ |
| | | Simplified Chinese | TD586AS |
| | | **Media Only** | |
| | E-Delivery | English | TD586AAE |
| | E-Delivery | Japanese | TD586AFE |
| | E-Delivery | French | TD586AJE |
| | E-Delivery | Simplified Chinese | TD586ASE |

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)
- 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, Media Operations, all integrations into other HP software, and electronic manuals. A separate media kit must be ordered for HP Data Protector Open File Backup (BA152AA).

**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

*Configuration Information*

| 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).

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 on 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 O-line Backup LTU. However, Online Backup of databases, which are not part of the operating system, require 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), VMware Consolidated Backup (VCB) and VMware ESX/ESXi Server backup require one Online Backup LTU for Windows, Linux license per ESX server, ESXi server, or vSphere server.
  **NOTE:** As of July 2, 2010 licensing of VMware Virtual Center and VCB Proxy Host servers is no longer required
- Microsoft Hyper-V environments require one Online Backup LTU for Windows, Linux license per physical Hyper-V server.
- Additional Online Backup LTU is required 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.

**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 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.

**HP Data Protector Open File Backup**

| | Description | Part Number |
|---|---|---|
| | for 1-server | BA153AA |
| | for 10-servers | BA153BA |
| | for 5-workstations | BA154AA |
| | for 1-enterprise server | BA155AA |
| | Media | BA152AA |
| E-Delivery | for 1-server | BA153AAE |
| E-Delivery | for 10-servers | BA153BAE |
| E-Delivery | for 5-workstations | BA154AAE |
| E-Delivery | for 1-enterprise server | BA155AAE |
| E-Delivery | Media | BA152AAE |

Includes the license-to-use (LTU) to perform open file of applications, databases and e-mail files (e.g. ".pst"- Microsoft Outlook files) running on the specified servers that are not covered by the Data Protector integration matrix. When using Microsoft VSS services to perform open-file backup, this license is not required.

For supported servers and workstations, please refer to the Data Protector support matrixes at: http://www.hp.com/go/dataprotector

- The Open File Backup media can be ordered via BA152AA.
  **NOTE:** BA152AA includes two versions of Open File Backup. Version 9.606a is required to support Netware and Windows Server (except Windows 2008). Version 10.02 is required to support Windows Server (including Windows 2008).

**HP Data Protector**

| | Description | Part Number |
|---|---|---|

*Configuration Information*

**Encryption extension**

| | | |
|---|---|---|
| | 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 E-Delivery |
|---|---|---|
| | 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 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 size on disk of all files used for the file library, as reported by the file system.

- 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 ma 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.

| | | Description | Part Number |
|---|---|---|---|
| **HP Data Protector Zero Downtime Backup (ZDB) extension** | | 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 |
| | 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 any 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 c 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

*Configuration Information*

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 any 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 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.

*Configuration Information*

| | | Description | Part Number<br>E-Delivery |
|---|---|---|---|
| **HP Data Protector Direct Backup using NDMP** | | 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

| | | Description | Part Number |
|---|---|---|---|
| **HP Data Protector Media Operations** | | Entry Level | B7100AA |
| | | Enterprise | B7101AA |
| | | Unlimited media | B7102AA |
| | | Media | TD587AA |
| | E-Delivery | Entry Level | B7100AAE |
| | E-Delivery | Enterprise | B7101AAE |
| | E-Delivery | Unlimited media | B7102AAE |
| | E-Delivery | Media | TD587AAE |

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

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 included in the Data Protector starter packs DVDs, but it can also be ordered separately via TD587AA.

*Configuration Information*

## Single Server Editions

| HP Data Protector, Single Server Edition | Description | Part Number E-Delivery |
|---|---|---|
| | **LTU Only** | |
| | for HP-UX | B7020BA |
| | for Sun Solaris | B7020CA |
| | for Windows | B7030BA |
| E-Delivery | for HP-UX | B7020BAE |
| E-Delivery | for Sun Solaris | B7020CAE |
| E-Delivery | for Windows | B7030BAE |
| | **Migration To Starter Pack** | |
| | for HP-UX | B7021AA |
| | for Sun Solaris | B7021DA |
| | for Windows | B7031AA |
| E-Delivery | for HP-UX | B7021AAE |
| E-Delivery | for Sun Solaris | B7021DAE |
| E-Delivery | for Windows | B7031AAE |

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

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, Solaris)
- 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.

For more information on HP Data Protector software

- Interactive digital hub site: http://www.hp.com/go/imhub/dataprotector
- 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

*Configuration Information*

To learn more, visit www.hp.com/go/im