IBM System Storage ProtecTIER Appliance Edition V2.4 functionality extends replication capabilities and delivers usability improvements

**Table of contents**

1. Overview
2. Key prerequisites
3. Planned availability date
4. Description
5. Publications
6. Technical information
7. Technical information
8. Ordering information
9. Terms and conditions
10. Prices
11. Announcement countries

**At a glance**

IBM® System Storage™ ProtecTIER® Appliance Edition V2.4

- Adds supports for many-to-one network replication and LUN masking
- Improves performance for single stream processing by up to 10 percent

**Overview**

The IBM System Storage TS7650 ProtecTIER Deduplication Appliance solution is an enterprise-class data protection platform designed to protect business information for midrange and enterprise customers while reducing the amount of physical disk storage space required and improving the reliability and quality of backups. The TS7650 ProtecTIER Deduplication Appliance solution is comprised of IBM System Storage ProtecTIER Appliance Edition V2.4 software and the IBM System Storage TS7650 ProtecTIER Deduplication Appliance (3958 Model AP1) hardware.

ProtecTIER Appliance Edition V2.4 is enhanced to include:

- IP replication from many sites to a single, central site
- LUN masking capabilities
- Performance improvements for single stream processing

ProtecTIER Appliance Edition V2.4 supports:

- In-line data deduplication powered by HyperFactor® technology
- Clustering for higher performance and availability (optional)
- IP replication support to allow virtual cartridges to be copied to a target ProtecTIER cluster based on defined policies (optional)
- IBM's path failover technology
- Virtual tape resources of up to 12 virtual tape libraries per cluster, up to 256 virtual tape drives per server, and up to 128,000 virtual cartridges per server
- Emulation of the IBM TS3500 tape library with IBM Ultrium 3 tape drives
- Emulation of the Quantum P3000 tape library with DLT or IBM Ultrium 2 tape drives
- LUN masking
Deploying the TS7650 ProtecTIER Deduplication Appliance solution can help organizations more efficiently protect their data while helping them manage the exponential growth of new data through reduction and elimination of duplicate data in their backups.

**Key prerequisites**

IBM System Storage ProtecTIER Appliance Edition V2.4 software requires the IBM System Storage TS7650 ProtecTIER Deduplication Appliance (3958 Model AP1) hardware. Refer to the Hardware requirements section.

**Planned availability date**

May 28, 2010

Availability of programs with encryption algorithm in France is subject to French government approval.

Cryptography in this product is limited to password encryption, authentication or digital signature.

**Description**

**Replication**

With ProtecTIER V2.4, IBM has enhanced the replication function of ProtecTIER Appliance Edition by supporting replication from up to 12 source systems to a single, common target system. Replication from several source systems to a single target system is referred to as many-to-one replication. The network of several source systems connected to a single target system is often referred to as a hub and spoke replication grid.

Hub systems in a hub and spoke replication grid may be configured to accept data from local backup applications at the hub site, in addition to receiving replicated data from the spoke systems. This is an enhancement from the replication implementation in ProtecTIER V2.3, where the target system was not allowed to accept local backup data. In the event of a disaster, the hub system can take over for any number of production spoke system, while continuing to receive data from the remaining spokes.

ProtecTIER supports any combination of TS7650 Appliances and TS7650G Gateways as the target and source systems. These systems may be single node systems or dual node clustered systems. Customers that continue to utilize the original replication model of one source system replicating to one target system may intermix ProtecTIER V2.3 and ProtecTIER V2.4 in their replication grid. All ProtecTIER systems in a hub and spoke replication grid must be running ProtecTIER Enterprise Edition V2.4 or higher, or ProtecTIER Appliance Edition V2.4 or higher.

Other replication enhancements in ProtecTIER V2.4 include:

- Enhanced setup and management
  - Replication timeframe management with weekly or daily schedule
  - Enhanced monitoring of repository space consumption
  - Enhanced cartridge statistics and status reporting capabilities with additional tools to determine which replicated cartridge is in-synch with its source
  - Graphical representation (map view) of the replication grid
  - Additional replication information in repository's cartridge view
- DR management: Enhanced Command Line Interface (CLI) for disaster recovery
• New controls
  – Setting system resource allocation preference between replication and backup
    ingest operations when performed concurrently
  – Enhanced Replication Rate Control (throttling) - per port or per system

**Usability**

ProtecTIER's usability has been improved with V2.4 through the support of Logical
Unit Number (LUN) Masking. LUN Masking is used to monitor device visibility by
allowing specific devices, such as virtual tape drives or virtual libraries, to be seen
only by a selected group of host initiators. A host initiator is the World Wide Name
(WWN), or the physical address of the port of a fiber card, of the host server that
the backup application is installed on.

LUN Masking allows you to assign specific devices to a specific host running backup
application modules. It enables multiple initiators to share the same target FC port
without having conflicts on the devices being emulated.

The LUN Masking setup can be monitored and modified at all times during system
operation. LUN Masking in ProtecTIER influences the visibility of the devices by
the hosts systems. Keep in mind that every modification in the LUN Masking in
ProtecTIER may affect the host configuration and may require rescanning by the
hosts.

**Performance**

ProtecTIER V2.4 includes performance enhancements designed to improve
throughput when processing single streams of backup data by up to 10%.

**Accessibility by people with disabilities**

A U.S. Section 508 Voluntary Product Accessibility Template (VPAT) containing
details on accessibility compliance can be requested at


**Product positioning**

**Data protection pain points in the data center**

Enterprise and midrange data centers require high-capacity, reliable, and scalable
data protection solutions with excellent price and performance. Delivering high-level
data protection is increasingly difficult for many reasons:

• Information volume is growing rapidly and must be protected.
• Shrinking backup and restore windows require more efficient, high-performance
data protection solutions.
• Pressure to lower capital expenditures for network bandwidth and data
infrastructure is driving the need for a simpler way to deploy and manage data
protection solutions.
• Increased need to more efficiently manage disk space of existing infrastructure by
improving utilization of current hardware.
• Increasing need to support more efficient, easier-to-manage, disaster recovery
strategies.

The TS7650 is designed to provide the following core differentiators:

• In-line deduplication: Helps avoid disruption to data protection processes.
• High performance: Sustainable throughput of up to 500 MB/sec in-line
deduplication capability.
• Flexible configurations: Three disk capacity configurations for different sized
environments.
• Data reduction: Reduces the amount of user data to be stored by up to 25 times, or more.
• Higher availability: Clustered configuration provides hardware redundancy in the event of a node failure.
• Data integrity: HyperFactor technology helps avoid "hash collisions" or "false positive" data matches.
• Data Agnostic: Not sensitive to data type, file name, or data structure of the specific backup application (unlike content-aware approaches).
• Path failover: Helps enhance availability.
• IP Replication: Reduces the data transferred over the IP network in support of DR plans by up to 25 times.

The IBM System Storage TS7650 ProtecTIER Deduplication Appliance differs from many other open systems virtual tape offerings through its in-line deduplication performance. Comparable offerings perform the actual deduplication as a post-process, which can elongate the backup cycle and increase disk storage requirements and cost.

Reference information

For information about IBM System Storage TS7650 Appliance (IBM 3958-AP1), refer to Hardware Announcement ZG09-0109, dated February 10, 2009.


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Software Maintenance

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Offering Information

Product information is available via the Offering Information Web site

http://www.ibm.com/common/ssi

Publications

All required publications are shipped with the corequisite IBM 3958-AP1 hardware order when the software preload feature is ordered on ProtecTIER Appliance Edition software.

To review publications titles for the IBM System Storage TS7650 Appliance (IBM 3958-AP1), refer to Hardware Announcement ZG09-0109, dated February 10, 2009.

Publications with software relevance included in the Publications CD-ROM, LCD8-1271-06, when the media supply feature is ordered for ProtecTIER Appliance Edition V2.4 include:

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<th>Title</th>
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<td>IBM System Storage TS7600 with ProtecTIER Problem Determination Guide for the TS7650 Appliance and TS7650G Gateway (3958-DD1, 3958-DD3, and 3958-AP1)</td>
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<td>ProtecTIER v. 2.4 Software Upgrade and Replication Enablement Guide</td>
<td>GC53-1196</td>
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Publications are available on the IBM Publications Center Web site and are included on the IBM System Storage TS7600 ProtecTIER - TS7650 & TS7650G Publications CD-ROM LCD8-1271-06 (part number 46X1338).

To order additional selected hardcopy publications for a fee or download free PDF format publications, visit the IBM Publications Center Web site.
Technical information

Specified operating environment

Hardware requirements
Requires the IBM System Storage TS7650 ProtecTIER Deduplication Appliance, IBM 3958 Model AP1.

Refer to Hardware Announcement ZG09-0109, dated February 10, 2009.

Management console

The TS7650 Appliance must have a user console in order to perform system installation and maintenance. One console (monitor, keyboard, and mouse) is required for each appliance. If multiple TS7650 appliances need to be accessed, they can be connected to a single console via a switch box or via a terminal server. You must place the console hardware order separately from the TS7650 Appliance solution order.

The console must be capable of operating one of the following operating systems:

- Windows® XP or Windows Server 2003
- Red Hat Enterprise 4, or later

The console must also have:

- At least 100 MB of available disk space
- At least 256 MB of RAM

The console must have access to the ProtecTIER service nodes at IP address (port 3501 is open on the firewall).

Confer with your IBM representative for console configuration alternatives.

Software requirements

Operating system prerequisites

The appropriate Linux® operating system is included with ProtecTIER Appliance Edition V2 software and is loaded on the TS7650 Appliance with your initial order.

Connectivity prerequisites

The supported Fiber Channel switches are listed in the System Storage Operation Center (SSIC) located at

http://www-03.ibm.com/systems/support/storage/config/ssic/

If this TS7650 ProtecTIER Deduplication Appliance is to be accessed via ProtecTIER Manager installed on another computer, network connections must be configured to allow access.

The program's specifications and specified operating environment information may be found in documentation accompanying the program, if available, such as a README file, or other information published by IBM, such as an announcement letter. Documentation and other program content may be supplied only in the English language.

Compatibility

The ProtecTIER Appliance Edition V2.4 software emulates, in both stand-alone and clustered configurations, the IBM System Storage TS3500 tape library with IBM
Ultrium 3 Tape Drives, and the Quantum P3000 tape library with DLT or IBM Ultrium 2 Tape Drives.

**Limitations**

ProtecTIER Appliance Edition V2.4 software is only supported for installation on TS7650 ProtecTIER Deduplication Appliance hardware (3958 Model AP1).

ProtecTIER supports any combination of TS7650 Appliances and TS7650G Gateways in the replication topology. Systems in a hub and spoke replication topology must run ProtecTIER V2.4, or later. Systems operating as a simple replication pair must run ProtecTIER V2.3, or later.

ProtecTIER path failover functions are not supported with Quantum P3000 virtual tape library definitions.

**Planning information**

**Customer responsibilities**

Physical planning is a customer responsibility. Detailed planning information is in the *IBM System Storage TS7600 with ProtecTIER Introduction and Planning Guide for the TS7650 AP1* (GC53-1193).

This guide is available at no charge at the IBM Publications Center. Refer to the Publications section.

**Packaging**

For new orders of IBM System Storage ProtecTIER Appliance Edition V2.4 (5639-XXP), the following media are shipped:

- IBM System Storage ProtecTIER Appliance Edition V2.4 (LCD8-1258-04)
- IBM System Storage ProtecTIER Manager V2.4 (LCD8-1040-05)
- IBM System Storage ProtecTIER Maintenance and Recovery Disk V2.4 (LCD7-4602-00)
- IBM System storage TS7600 with ProtecTier - TS7650 & TS7650G Publications CD-ROM V2.4 (LCD8-1271-06)
- IBM ProtecTIER Software Upgrade Migration (GC53-1196-02)
- Start Here for IBM System Storage TS7600 with ProtecTIER (GA32-0644-01)
- License Agreement for Machine Code (Z125-5468-04)

The paid invoice acts as Proof of Entitlement (PoE) for all orders of IBM System Storage ProtecTIER Appliance Edition V2.4 software.

Refer to the Ordering information section and to the Hardware Announcements listed in the Reference information section for correlated hardware order features.

Media feature number 5809 causes the code CDs to be shipped.

Serial number only feature 3444 suppresses code CDs from being shipped.

**Security, auditability, and control**

This product uses the security and auditability features of host hardware, host software, or application software to which it is attached. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.
Global Technology Services

Contact your IBM representative for the list of selected services available in your country, either as standard or customized offerings for the efficient installation, implementation, or integration of this product.

Ordering information

Consult your IBM representative.

Charge metric

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Server

Server is the unit of measure by which this program is licensed. A server is a computer system that executes requested procedures, commands, or applications to one or more user or client devices. A Proof of Entitlement (PoE) must be obtained for each server regardless of the number of processor cores or partitions in the server on which the program runs or each server managed by the program. Where blade technology is employed, each blade is considered a separate server.

IBM System Storage ProtecTIER Appliance Edition V2.4

Order one ProtecTIER Appliance Edition V2 "per server" use authorization feature for each 3958 Model AP1 feature number 3120 configured. This entitles the customer to use the basic VTL functionality of ProtecTIER and is required on every server running ProtecTIER.

Data Deduplication

Order basic capacity authorizations corresponding to the total terabytes (TB) managed by the TS7650 appliance. This entitles the customer to use the HyperFactor data deduplication functionality of ProtecTIER. It is required for every TS7650 Appliance which will deduplicate data received from a backup application. Basic capacity authorizations are not required for "no deduplication" licenses, or for the target system in a replication topology, unless that target system is also receiving data from a backup host.

Terabyte capacity ordering is by cumulative tier. Starting with tier 1 (1-12 TB), order the quantity from each successive tier required to reach the total TB managed by the server, filling each tier in succession. Valid capacity values for the TS7650 Appliance are 7 TB, 18 TB, and 36 TB.

Replication

Order replication capacity authorizations corresponding to the total terabytes (TB) managed by the TS7650 appliance. This entitles the customer to use the replication functionality of ProtecTIER. It is required for every TS7650 Appliance which replicates data to another TS7650 appliance, or receives replicated data from another TS7650 Appliance. Terabyte capacity ordering is by cumulative tier. Starting with tier 1 (1-12 TB), order the quantity from each successive tier required to reach the total TB managed by the server, filling each tier in succession. Valid capacity values for the TS7650 Appliance are 7 TB, 18 TB, and 36 TB.
**Clustered Appliances**

When two 3958 Model AP1 features 3120 are configured on the appliance hardware, order cluster authorizations corresponding to the total storage capacity managed by the ProtecTIER appliance.

Cluster orders require quantity 2 ProtecTIER Appliance Edition V2 (per server) use authorization features for each appliance.

Valid capacity values for the TS7650 Appliance are 7 TB, 18 TB, and 36 TB.

**Note:** Cluster support requires cluster feature number 3447 on the 3958-AP1 hardware order. Refer to the Hardware Announcement listed in the Reference information section.

**Capacity upgrade orders**

Customer representatives should be prepared to furnish the ProtecTIER server serial number or system identification unit (SIU) for the TS7650 appliance being upgraded with additional capacity.

Upgrade orders using cumulative tiers are made starting within the tier representing the current capacity authorized (for capacity with current Software Maintenance).

**ProtecTIER Appliance edition billing features** The billing features and pricing information for ProtecTIER Appliance Edition remain unchanged. Details may be found in:

- Software Announcement ZP09-0508, dated October 27, 2009
- Software Announcement ZP09-0250, dated July 14, 2009
- Software Announcement ZP09-0033, dated February 10, 2009

**ProtecTIER Appliance Edition Software Maintenance**

Order Software Maintenance Registration corresponding to each ProtecTIER Appliance Edition V2 product base, capacity, replication and cluster authorization feature, for both new and upgrade orders.

Order renewals prior to the expiration of the original Software Maintenance registration period or previous Software Maintenance renewal.

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The information provided in this announcement letter is for reference and convenience purposes only. The terms and conditions that govern any transaction with IBM are contained in the applicable contract documents such as the IBM International Program License Agreement, IBM International Passport Advantage® Agreement, and the IBM Agreement for Acquisition of Software Maintenance.

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IBM International Program License Agreement including the License Information document and Proof of Entitlement (PoE) govern your use of the program. PoEs are required for all authorized use.

This software license includes Software Subscription and Support (also referred to as Software Maintenance).

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License Information form number
GI13-1704-00

The program's LI will be available for review on the IBM Software License Agreement Web site


Limited warranty applies
Yes

Limited warranty
IBM warrants that when the program is used in the specified operating environment, it will conform to its specifications. The warranty applies only to the unmodified portion of the program. IBM does not warrant uninterrupted or error-free operation of the program or that IBM will correct all program defects. You are responsible for the results obtained from the use of the program.

IBM provides you with access to IBM databases containing information on known program defects, defect corrections, restrictions, and bypasses at no additional charge. For further information, consult the IBM Software Support Handbook found at

http://www.ibm.com/support/handbook

IBM will maintain this information for at least one year after the original licensee acquires the program (warranty period).

Money-back guarantee
If for any reason you are dissatisfied with the program and you are the original licensee, you may obtain a refund of the amount you paid for it, if within 30 days of your invoice date you return the program and its PoE to the party from whom you obtained it. If you downloaded the program, you may contact the party from whom you acquired it for instructions on how to obtain the refund.

For clarification, note that for programs acquired under any of IBM's On/Off Capacity on Demand (On/Off CoD) software offerings, this term does not apply since these offerings apply to programs already acquired and in use by you.

Authorization for use on home/portable computer
You may not copy and use this program on another computer without paying additional license fees.
Other terms

Volume orders (IVO)
Yes. Contact your IBM representative.

Passport Advantage applies
No

Usage restriction
Yes

IBM System Storage ProtecTIER Appliance Edition V2 software (5639-XXP) is licensed on a per server and per terabyte basis. Optional Clustering support and Replication support functions are licensed on a per terabyte capacity basis.

Software Subscription and Support (Software Maintenance) applies
Yes. All distributed software licenses include Software Subscription and Support (also referred to as Software Maintenance) for a period of 12 months from the date of acquisition, providing a streamlined way to acquire IBM software and assure technical support coverage for all licenses. Extending coverage for a total of two, three, four, or five years from date of acquisition may be elected.

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Software Subscription and Support (Software Maintenance) does not include assistance for the design and development of applications, your use of programs in other than their specified operating environment, or failures caused by products for which IBM is not responsible under this agreement.

System i Software Maintenance applies
No

Variable charges apply
No

Educational allowance available
Yes. When ordering through the program number process, a 15% education allowance applies to qualified education institution customers.

Education Software Allowance Program applies when ordering through the program number process.

ESAP available
Yes, to qualified customers.
Prices

The billing features and pricing information for ProtecTIER Appliance Edition remain unchanged. Details may be found in:

- Software Announcement ZP09-0508, dated October 27, 2009
- Software Announcement ZP09-0250, dated July 14, 2009
- Software Announcement ZP09-0033, dated February 10, 2009

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For more financing information, visit

http://www.ibm.com/financing

Announcement countries

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