



IBM System Storage with ProtecTIER Software

Release Notes

Version 3.3.6.1





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Release notes

These release notes are for IBM System Storage with ProtecTIER Software.

Release date: September 9, 2014.

Introduction

This document is a reference for installation and contains other useful information about the IBM System Storage TS7620 with ProtecTIER V3.3.6.1.

Prerequisites

Prerequisites include the following:

- ProtecTIER Manager V3.3.5 must be installed.
- The full package code must already be installed on the system. Attempting to install this patch on a Linux OS system without the full package code already installed will result in failure.

Code levels

Code level requirements include the following:

Software	Version
TS7650G Software level	3.3.6.1
Dtcmulex	5233.006
Ptlinux	7133.148
Ptrepmgr	6133_85

New features and resolved problems

The ProtecTIER introduction and planning guides describe the new features in the release:

IBM System Storage TS7650 ProtecTIER 3.3 Deduplication Appliance and TS7650G Deduplication Gateway Introduction and Planning Guide (3958-AP1 and 3958-DD5) (GA32-0918-08)

Or

IBM System Storage® TS7620 ProtecTIER® 3.3 Deduplication Appliance Express Introduction and Planning Guide (GA32-0913-06)

See the Additional documentation section of this document for information about how to find these publications.

New features:

Fix ID	Description
81025989 81025991 52000332	Upgraded the EMULEX FC Adapter to V9.5.7 to solve the unavailable EMULEX ports issue.
81026007	Enhanced handling for specific scenario of defective storage unit within STM offline utility.
81026059	Added Storwize storage family to PT repository planner

ProtecTIER Server issues:

Issue ID	Fix ID	Description
PTT-514	81026146	Restore the MegaRAID LSI controller firmware to 12.12.0137 in SMB2 due to performance issue in SMB2
18861	81025875	Added additional protection layer into ProtecTIER DHF module (Diligent HyperFactor) in case of system resource starvation
22869	81026015	Made "DisplayMachine Reported Product Data" (MRPD) more robust to deal with scenarios that the report was not displaying
22959	81026025	Improved failure handling when upgrading ProtecTIER code via GUI. GUI will not lose connection with ProtecTIER due to iptables
none	81026027	Added to service report the content of dmsetup.txt.
20991	81026028	Solved the scenario in FSI system with replication where nominal size reported in GetSpaceInfo on FSI hub is different from DFS statistics value.
23156 18969 23106	81026034	Solved the scenario that STM reports STM_NO_STORAGE_SPACE when there is space available
23054	81026038	Made Service report more robust. A service report will be generated even if there is no repository layout configuration.
22452 PTT-44	81026042	Solves an issue that causes fstab to lose all repository mounts when upgrading from PT code that uses Red Hat 5.4 to PT code that uses RH 5.6.
PTT-39	81026043	Solves an issue in which a "permission denied" error prevents DB2 from accessing FSI share.
PTT-60	81026044	Solves an issue where "check and recover" failed to recover DB with more than 256 tapes
22492 22681	81026045	Solves an issue of Node Replace failure at V3.3.x after upgrading from 3.1.x to 3.3.x and then executing node replacement.
22973 PTT-78	81026047	Solves an issue of system resources starvation when FSI system replicate at high workload with many concurrent replicators.
PTT-54 PTT-46	81026049	Solves an issue where MegaSAS.log files grow unmanaged, above 10 files of 10M each one.

PTT-110 PTT-111	81026050	Solves an issue on SM2 related to fan utilization working constantly on 100%
none	81026051	Solves an issue on FSI systems only that report storage usage of few GBytes instead of zero, when there is no data in the repository.
PTT-170	81026069	Updated multipath settings to support Flash storage FS820 and FS840.
19483	81026075	Solves an issue when configuring time and time zone via the menu at the same when no time server is configured, time will not update correctly.
	81026087	Improved handling of "unknown" status on the Battery replacement field during RAS health check
PTT-300	81026091	Solves an issue on FSI systems where starting all services from the menu will fail

ProtecTIER Manager issues:

Issue ID	Fix ID	Description
21631	51005754	Solves wrong File system capacity returned when using PTCLI on FSI environment, fix is returning size in GBytes instead of bytes.
PTT-48	51005774	Solved take ownership failure over DR directory, when directory name is longer than 15 characters.

Upgrading the ProtecTIER software

Important: For all upgrades or updates, follow the instructions exactly as written, including when to stop and start vtfd and ptcluster services for each node.

For TS7610 or TS7620 Appliance Express systems, use the IBM System Storage® TS7610 and TS7620 ProtecTIER® v3.3 Deduplication Appliance Express Software Upgrade Guide (SC273641-07) and choose one of the following options:

- Upgrading a TS7610 or TS7620 system from v3.2 (Option A)
To upgrade to v3.3.6.1 from v3.2, follow the procedure described in Chapter 4, "Upgrading the ProtecTIER software to version 3.3 from version 3.2.x" in the IBM System Storage TS7610 and TS7620 Appliance Express ProtecTIER v3.3 Software Upgrade Guide (SC27-3641-07).
- Upgrading a TS7610 or TS7620 system from v3.1.8 or higher (Option B)
To upgrade to v3.3.6.1 from v3.1.8 or above, follow the procedure described in Chapter 5, "Upgrading the ProtecTIER software to version 3.3 from version 3.1.8 or higher" in the IBM System Storage TS7610 and TS7620 Appliance Express ProtecTIER v3.3 Software Upgrade Guide (SC27-3641-07).
- Upgrading a TS7610 or TS7620 system from v2.4.x, v2.5.x or v3.1.X (any 3.1 version below 3.1.8) (Option C)
To upgrade to v3.3.6.1 from v2.4.x, v2.5.x or v3.1.x (any 3.1 version below 3.1.8), follow the procedure described in Chapter 6, "Upgrading ProtecTIER version 2.4 or 2.5 to RedHat 5.6 and version 3.3" in the IBM System Storage TS7610 and TS7620 Appliance Express ProtecTIER v3.3 Software Upgrade Guide (SC27-3641-07).
- Updating a TS7610 or TS7620 system already at v3.3 with a fix update or patch (Option D)
Update a system already at v3.3 with a later fix update or patch by using the procedure described in Chapter 7, "Applying fixes to update the ProtecTIER software for version 3.3 and higher" in the IBM System Storage TS7610 and TS7620 Appliance Express ProtecTIER v. 3.3 Software Upgrade Guide (SC27-3641-07).

Additional documentation

The support homepage contains all relevant documentation.

To access the additional documentation:

- In a web browser, navigate to <http://www-947.ibm.com/support/entry/portal/overview>
- Search for the keyword 'ProtecTIER'

Restrictions and known issues

Restrictions and known issues include the following:

- Before performing any configuration operation, upgrade both nodes to the same patch level.
- Do not move a cartridge from the shelf of the remote repository while it is the target of a replication operation.
- FSI Replication between 3.2.x and 3.3.x repository is supported only from 3.2.2.0 and above.
- The table below represents the maximal number of recommended concurrent streams with FSI Backup and Restore functions. Exceeding these limits may result in performance degradation which under extreme conditions could lead to timeouts in your backup jobs.

The maximum number of recommended concurrent streams is specified as a byproduct function of the repository configured Meta Data and User Data configuration throughput.

Therefore, this requires careful planning and consideration.

It is recommended that you not exceed this number.

Repository throughput ¹	Number of streams
TS7620 3959-SM2 base ²	20 streams
TS7650(G) - 100-200MB/sec & TS7620 with 1 EXP	40 streams
TS7650(G) - 200-300MB/sec & TS7620 with 2 EXP	64 streams

NOTES:

1. Repository supported throughput means that both the required Meta Data and User Data raids are configured to support the desired throughput.
 2. No systems (Gateway) should be configured for less than 100MB/sec
 3. For NBU the max # of jobs supported is 128.
- From v3.3.6.1 release all upgrades on any ProtecTIER system having less than 64GB RAM will perform double reboot. This behavior is required as part of the solution for the memory fragmentation issue. As a result, the max drives limitations were modified as shown in the following table:

ProtecTIER System RAM	Number of max drives
24 GB (TS7610-SMB, TS7650-AP1)	64 drives
32 GB (TS7650G-DD3)	128 drives
48 GB (TS7620-SMB2)	128 drives
64 GB (TS7650G-DD4 & DD5)	256 drives

NOTES:

The max number of drives is modified only in cases where the current system defined number of drives is less than or equal to the new desired max value. In cases where the system has already more drives defined than the desired new max, a new max value will be set to align with the existing settings (on boundary of 32). For example: if the ProtecTIER system has 32GB RAM and has 140 drives defined then the new max value will be set to 160.

Issue ID	Description	Workaround
20431	Following Active Directory Server reboot, ProtecTIER server cannot query users from it	On the ProtecTIER Sever run: "service winbind restart"
20678	Memory failures in SM2 might not trigger an alert	Not available, no impact
PTT-41	Nonvalid error message is issued when doing scratch install of SMB2 using VTL application: "[ERROR] - (6069) main::setMemoryReq [97] Fail to get nodeid"	Not available, no impact

Compatibility

Compatibility requirements include the following:

- ProtecTIER v3.3.6.1 works with TSSC code level 5.12.8 or later.
- ProtecTIER v3.3.6.1 requires the use of ProtecTIER Manager v3.3.6.
- ProtecTIER Manager earlier than v3.3.6.1 is not compatible with ProtecTIER Server v3.3.6.1. Communication between the two will fail.
- Replication is supported from ProtecTIER v2.4 or later. SMB v2.1 systems are also supported.
- Replication between ProtecTIER v2.3 and ProtecTIER v3.1.8 and above is NOT supported.
- Replication configuration operations require the use of Replication Manager v3.3.6.1 or later ProtecTIER software.

OpenStorage compatibility:

ProtecTIER Server V3.3.6.1 is compatible with plug-in 2.5.0.0 and later. OpenStorage plug-in V3.3 is compatible with ProtecTIER Server V2.5.X and later.

Compatibility matrix:

To find the matrix these steps should be taken:

1. Go to <http://www-03.ibm.com/systems/storage/tape/index.html>
2. Scroll down to the heading "Virtual tape systems"
3. Find either TS7650G, or TS7620 and click the relevant link
 - TS7650G = <http://www-03.ibm.com/systems/storage/tape/ts7650g/index.html>
 - TS7620 = <http://www-03.ibm.com/systems/storage/tape/ts7620/index.html>
4. Look for the "Learn more" heading (middle of the page) and click the pdf link for "Independent Software Vendor (ISV) matrix" document.

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