



IBM System Storage TS7600 with ProtecTIER

Release Notes

Version 3.4.1.0





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Release notes

These release notes are for IBM System Storage TS7600 with ProtecTIER Software, version 3.4.0.0

Release date: 20 May 2016.

Introduction

This document is a reference for installation and upgrades and contains other useful information about the IBM System Storage TS7650G with ProtecTIER v3.4.1.0

Prerequisites

Prerequisites include the following:

- ProtecTIER Manager V3.4 must be installed.
- For fix updates, the full package of ProtecTIER v3.4 code must already be installed on the system; installation of a fix update or patch on a Linux OS system without the full package code already installed will fail.

Please contact IBM support for memory upgrade plan.

- ProtecTIER V3.4.X no longer supported on 3958-AP1 appliance, TS7610-SMB and 3958-DD3 machines. Those machines must not be upgraded to V3.4
- ProtecTIER V3.4.X no longer supports OST. Systems with OST enabled must not be upgraded to v.3.4.1.0

Code levels

Code level requirements include the following:

Software	Version
ProtecTIER software level	3.4.1.0
dtcemulex	5234_013
ptlinux	7234_035
ptrepmgr	6234_007

New features and resolved problems

The ProtecTIER introduction and planning guide describes the new features in the release:

IBM System Storage TS7650 ProtecTIER 3.4 Deduplication Appliance and TS7650G Deduplication Gateway Introduction and Planning Guide (3958-DD6) (GA32-0918)

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

ProtecTIER Server issues:

Issue ID	Fix ID	Description
PTT-2311 PTT-2501	81026683	Add health monitoring and BOM check for 10G intel cards Add support for new Intel 1G cards
PTT-2387	81026684	Creating repository over LUNs larger than 8TB (fixing bug in 3.4.0)
	81026696	Changing ring buffer size to maximum to avoid dropped packets
PTT-2417	81026707	Fixing unexpected reboot after canister replace
	81026712	Install r2.29 seagate firmware, added a validation for the BMC IP before update firmwar
PTT-2561	81026714 81026730 81026748 81026762 81026764	New defraggers algorithm



PTT-2455	81026719	Unable to extend existing VG for increase capacity
PTT-2395	81026721	Node replacement fails for DD6 FSI
PTT-2181 PTT-2285	81026611	Fixing health monitor for DD6
PTT-2320	81026664	SAS replace logs not saved to /pt_wotk in case of failure
PTT-2296	81026732	change elxflash flags when updating Emulex fw
PTT-2453	81026738	Properties file is missing on the repository
PTT-2509	81026745 81026783	Add a BMC Log collection to the service report menu
PTT-2325	81026735	Failed memory DIMM is not reported in the full system check and does not send call home
PTT-2295	81026741	High temperature alerts are not reported
	81026750	enable forcing specific FW level for DD6 Avago BE cards to be part of PT FW upgrade procedure
PTT-2486	81026722	Add relevant performance tool files to be part of PT source control
PTT-2510	81026755	internal.xml error reported when creating new repository
PTT-2355	81026723	CIFS mount fail with incompatible samba version
PTT-2606 PTT-2579	81026768 81026781	Performance tool failed to be executed on a FSI system with no replication + Change jquery version on performance tool
PTT-2584	81026770	Generate HM to monitor and correct the "rework" issue with the DD6 (Workaround for Seagate CRC counter error)
PTT-2602	81026784	statistics of Defraggers update

Installation Instructions

The installation roadmaps guide contains complete installation instructions for VTL systems:

IBM TS7650G ProtecTIER Deduplication Gateway for ProtecTIER 3.4 Installation Roadmap Guide (GA32-0921-13)

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

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 TS7650 system, use the IBM TS7650 with ProtecTIER software upgrade guide (SC27-3643-09) and choose one of the following options:

- Upgrading a TS7650 system from v3.3 (Option A)
To upgrade to v3.4.1.0 from v3.3, follow the procedure described in Chapter 5, "Upgrading the ProtecTIER software to version 3.4 from version 3.3.x" in the IBM TS7650G for ProtecTIER Software Upgrade Guide V3.4. (SC27-3643-09).
- Upgrading a TS7650 system the ProtecTIER software to 3.3.x from version 3.1.8 or higher using ProtecTIER Manager. (Option B)
To upgrade to v3.4.1.0 from v3.1.8 or above, follow the procedure described in Chapter 6, "Upgrading the ProtecTIER software to version 3.3 from version 3.1.8 or higher" in the IBM TS7650G for ProtecTIER Software Upgrade Guide V3.4. (SC27-3643-09).
- Updating a TS7650 system already at v3.4 with a fix update or patch (Option C)
Update a system already at v3.4 with a later fix update or patch by using the procedure described in Chapter 10, "Applying fixes to update the ProtecTIER software for version 3.4" in the IBM TS7650G for ProtecTIER Software Upgrade Guide V3.4. (SC27-3643-09).

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
TS7650(G) - 300-450MB/sec	96 streams
TS7650(G) > 450MB/sec	192 streams (max # supported) ³

NOTES:

1. Repository supported throughput means that both the required Meta Data and User Data RAID's 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 v3.4 release all upgrades on any ProtecTIER system having less than 64GB RAM will require 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
48 GB (TS7620-SMB2)	128 drives
64 GB (TS7650G-DD4 & DD5)	256 drives
128 GB (DD6)	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 already has 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
PTT-2400	Cartridge Query Tool to delete shelf cartridges via the PT Manager returns an error	The process completes successfully and deletes the carts. Workaround is to refresh the GUI view.
PTT-2284	Upgrade via GUI isn't showing progress.	SSH to machine and see the progress via menu OR run upgrade single node via menu.
PTT-2581	eth2 is lost after canister replace	Reboot the server after finishing the replacement

Compatibility

Compatibility requirements include the following:

- ProtecTIER V3.4.1 does not support attachment to the TSSC feature on the 3958-DD6 server. Therefore, TSSC must be detached from 3958-DD4 and 3958-DD5 prior to replacing them with the 3958-DD6 system. However the 3958-DD4 and 3958-DD5 systems continue to support attachment to the TSSC for the V3.4 ProtecTIER release.
- ProtecTIER v3.4.1.0 requires the use of ProtecTIER Manager v3.4
- ProtecTIER Manager earlier than v3.4 is not compatible with ProtecTIER Server v3.4.1.0. 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 v3.4 or later ProtecTIER software.

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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