



IBM System Storage with ProtecTIER Software

## Release Notes

Version 3.3.7





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## Release notes

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

Release date: March 31, 2015.

## Introduction

This document is a reference for installation and contains other useful information about the IBM System Storage TS7650G, TS7610 and TS7620 with ProtecTIER V3.3.7.

## Prerequisites

Prerequisites include the following:

- ProtecTIER Manager V3.3.7 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.
- ProtecTIER cross platforms recommended level : 3.3.6.1 (\*)

(\*) Notice: If you are running on older hardware, specifically the 3958-AP1 appliance or the 3958-DD3 gateway server, a memory upgrade (64GB RAM) is required to upgrade to ProtecTIER V3.3.6.1 when your system exceeds any of these configuration values:

1. More than 64 virtual drives
2. Installed physical storage greater than 300TB
3. There are 8 paths or more per mpath LUN

Please contact IBM support for memory upgrade plan.

## Code levels

Code level requirements include the following:

Software	Version
TS7650G Software level	3.3.7.0
Dtcmulex	5233.006
Ptlinux	7133.151
Ptrepmgr	6133_86

## 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
81026160	STG preferred map Improves PT STG allocation mechanism relevant mainly for large scale repositories
81026282	reducing boot time
81026174 81026185 81026210 81026225 51005779	Dedup Estimator

51005780 51005781 51005782 51005783	
81026262	Reduce the time the defrag scan takes during the population of the cache.

ProtecTIER Server issues:

Issue ID	Fix ID	Description
PTT-322	81026159	Allows to manually update the GridDb file and updates the CRC via vtutil.
PTT-847	81026212	Solves a rare occasion during replication which causes a cartlist mismatch when the hub is overloaded.
RTC- 14773	81024749	Solves a replication issue during a visibility change by validating that a visibility change waits for replication actions to complete before starting.
PTT-981	81026256	Solves issue of incorrect FRU presentation by RAS and PT Manager in SM2 during disk failure.
PTT-48	51005774	Enforces DR directory length policy of up to 15 characters and allows to take ownership of directories with a name longer than 15 characters.
PTT-979	81026252	Updated Analyze-Session manual description.
PTT-138	81026089	Removes existing tcpdump files created by previous upgrades when performing a new upgrade.



PTT-901	81026242	Prevents issue of Call Home when BatteryReplacement string is empty and adds MegaCLI command output to log when more information is needed.
PTT-891	81026236	Fixes an issue when autorun proceeds to a wrong installation stage when an incorrect input is entered.
PTT-992	81026251	Allows Check and Recover to successfully finish when an STG that has all STUs detached exists.

#### 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.

## 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 v3.3.7 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 v3.3.7 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 v.3.3 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 v3.3.7 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).

For TS7650 Appliance or TS7650G (Gateway) systems, use the IBM System Storage TS7650 ProtecTIER v3.3 Software Upgrade Guide (SC27-3643-07) and choose one of the following options:

- Upgrading a TS7650 or TS7650G system from v3.1.8 or higher (Option A)  
To upgrade to v3.3.7 from v3.1.8 or above, follow the procedure described in Chapter 4 (using ProtecTIER Manager) or Chapter 5 (using ProtecTIER Service Menu),



"Upgrading the ProtecTIER software to version 3.3 from version 3.1.8 or higher" in the IBM System Storage TS7650 ProtecTIER v. 3.3 Software Upgrade Guide (SC27-364307).

- Upgrading a TS7650 or TS7650G system from v2.4.x, v2.5.x or v3.1.X (any 3.1 version below 3.1.8) (Option B)

To upgrade to v3.3.7 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 Red Hat Linux and ProtecTIER for servers before version 3.1.8" in the IBM System Storage TS7650 ProtecTIER v. 3.3 Software Upgrade Guide (SC27-3643-07).

- Updating a TS7650 or TS7650G system already at v3.3 with a fix update or patch (Option C)

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 TS7650 ProtecTIER v. 3.3 Software Upgrade Guide (SC27-3643-07).

## 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 <sup>1</sup>	Number of streams
TS7620 3959-SM2 base <sup>2</sup>	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) <sup>3</sup>

**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 v3.3.7 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 v3.3.7 works with TSSC code level 5.12.8 or later.
- ProtecTIER v3.3.7 requires the use of ProtecTIER Manager v3.3.7.
- ProtecTIER Manager earlier than v3.3.7 is not compatible with ProtecTIER Server v3.3.7. 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 v3.3.7 or later ProtecTIER software.

OpenStorage compatibility:

ProtecTIER Server V3.3.7 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.

## Documentation format

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