



IBM System Storage TS7600 with ProtecTIER

Release Notes

Version 3.1.14





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Release notes

This document is a reference for the installation of the IBM System Storage TS7650G with ProtecTIER v3.1.14 and contains other useful information about the IBM System Storage TS7650G with ProtecTIER v3.1.14.

Release date **30** January 2013.

Introduction

This document is a reference for installation and upgrades and contains other useful information about the IBM System Storage TS7600 with ProtecTIER v3.1.14.X.

Prerequisites

The following is a list of prerequisites:

- ProtecTIER Manager V3.1.14 must be installed.
- RedHat code level 5.6 must be installed on the system first. The upgrade to V3.1.14 will fail if RedHat version 5.6 is not installed first.
- The full package code must have already been installed on the system. Installation of this patch on a Linux OS system will fail without the full package code already being installed.

Code levels

The table below lists the code level requirements:

Software	Version
IBM System Storage TS7650G with ProtecTIER	3.1.14
dtcemulex	5230.005-0
Ptlinux	7130.058-0
ptrepmgr	6130.035-0

New features and resolved problems

The ProtecTIER Introduction and Planning Guides describe the new features in the release:

IBM System Storage TS7650 ProtecTIER Deduplication Appliance and TS7650G Deduplication Gateway Introduction and Planning Guide (3958-AP1 and 3958-DD4) (GA32-0918)

Or

IBM System Storage® TS7610 and TS7620 ProtecTIER® Deduplication Appliance Express Introduction and Planning Guide (GA32-0913)

See the [Additional documentation](#) section of this document for information about how to find these publications.

ProtecTIER Server issues:

Issue ID	Fix ID	Description
14987	81019502	The trace level of the server log messages was changed from "ERROR" to "INFO" for the increase capacity operation.
14860	81020129	The wrong statistics issue in the GUI for manual replication was solved.
16527	81020743	The issue experienced when the wrong state of the hardware log file caused service report creation failures was solved.
N/A	81020808	The peripheral device qualifier was changed in the case of INVALID_LUN_TYPE from 0x11 to 0x3.
16993	81021021, 81023113	The problem with the wrong cartridge ID, which was used for performance investigation in the ring file, was solved.
17455	81021344	The message about replication failures experienced as a result of a full repository in the destination was improved.
17392	81021354	The issue experienced when the replication statistics profile was created in an excel file with too many columns was solved.
18139	81021809	The system name was limited to 16 chars.
18105	81021810	The trace level, in the case of OST backup failures experienced as a result of losing network connectivity, was changed from "FATAL" to "ERROR".
18039	81021871	The irrelevant message that was displayed during the RAS configuration was redirected to log file.
17751	81021887	Compressor statistics files were added to the service report.
18601	81022033	The issue experienced when illegal characters were used to choose a system name was solved.

18739	81022166	The missing RAS IP address was added to the configuration file.
19086	81022349	The trace level, in the case of VTL process killing, was moved from "FATAL " to "ERROR".
15608	81020143	The segmentation fault issue experienced while running the VTL util tool was solved.
15772	81020234	The recovery process failures experienced when replacing cartridges from the library to the shelf failed, as a result of VTFD being stopped, was solved.
16072	81020507	The mechanism of collecting the statistic files for their service report was improved.
16519	81020740	The unexpected behavior experienced while running the configuration transaction for the remote repository, while still under the starting processes, was solved .
17043	81021047	The sense status to host was changed in case of the library delete failed for a cluster with 2 nodes.
17244	81021196	The rollback procedure issues experienced in the case of the create repository failures were solved.
17532	81021332	The number of IOs on a disk was reduced to remove contention and to update the VTR statistics file in the case of high loads experienced from backup and replication activities.
17533	81021339	The issue experienced when the front end adapter error is wrongly sent was solved.
	81021528	The issue experienced when a file system umount failed, as a result of syncing data between the cache and disk failures, was solved.
18294	81021897, 81021757	The command for driver initiator used during the load process was changed.
18894	81022233	The issue experienced when the CommVault parser prints error in trace about no weeds block in the data file was solved.
18776	81022259	Sync data was added between the cache and disk operations for when a umount file system operation failure occurs.
17787	81021538	The issue experienced when a replication of weeds file failed was solved.
13731	81022560	The Cluster Manager watchdog version was updated to solve several fence issues.
14424	81019712	The time out for DSPF transactions was increased to solve replication failure issues experienced when the system is under high load and the synch between local and remote repositories may take a lot of time.
16371	81020638	The issues experienced when stopping services and processes

		during a VTFD restart were solved.
14897	81021003	The CMAN package was updated to version cman-2.0.115-68.el5_6.7.
17534	81021331	The segmentation fault issue, which happened at end of repository and full STM, was solved.
19009	81021408	The dedup and performance degradation in Tivoli Storage Manager environment was fixed.
18291	81021894	The irrelevant errors were removed from trace in the scenario of adding a node to a cluster before creating a cluster.
18768	81022165	The issue of incorrectly calculating allocable space was solved.
17270	81022553	Trace messages were added to fix monitor fence issues.
N/A	81022227	Kernel levels were updated to 2.6.18-238.40.1 and RedHat device mapper to new version: device-mapper-multipath-0.4.7-46.el5.x86_64
12486	81020413	The fence issue, caused as a result of invalid node ID, was solved.
17411	81021280	The DDM replacement issue was solved in the Appliance Express machines.
19113	81022423	The issue experienced when DSPF entered to error state in the case of failover was solved.
15834	81020493	Trace memory allocation summary and thread stack space size was added to the log files to monitor the memory allocation issue.
N/A	81021560	The stack size of internal function was limited to 1MB.
9340	81021499	The check point will be updated for every replication transaction. This fix should solve the replication failures issue.
N/A	81021048	Trace was added for write statistics monitoring.
N/A	81021340	The tape backup statistics were changed in the logs to be printed in usec.
N/A	81021386	The verbosity of the inquiry command was changed to NOTICE.
18621	81022036	A new service report option was added: "-get_replication_rate_limits". The "getReplicationRateLimits.txt" file will be created with replication rate limits statistics.
17539	81022046	Grid manager service status was added to the global services status output.
18982	81022309	The grammatical mistake of the trace message in the internal log file was solved.
14089	81019001	The error message generated for IPS WTI, during update WTI code

		failures, was updated.
14191	81019040	A trailing line was added in the output of the rsCerHMDisplay function.
14746	81019425	The core dump issue experienced while stopping the Master node of a cluster was solved.
N/A	81019796	Messages were added to the log file about each action from the "menu" commands.
15896, 20153	81020331	The calculation of lines/hour in "/var/log/messages" file and improved log rotation mechanism was changed.
16138	81020489	The DS controller status was updated in the AP1 to be correct according to the real state.
16578	81020747	An option was added for every call to the configRAS operation to check the IMM setup.
17178	81021140	The issue experienced when WWN wasn't updated on a reboot with new emulex card was solved.
N/A	81021325	The wrong option to call IMM in call home was removed.
16454	81021347	The issue experienced when the "replication 1" interface and the "replication 2" interface was switched on a fresh DD3 install was solved.
17837	81021537	The issue experienced when RAS sends a call home about PL lock was solved.
17807	81021573	The issue experienced when the health check didn't report bad dimms was solved.
18527	81021757	DD4 and DD5 firmware levels were updated: Lib_Utills-1.00-09.noarch.rpm MegaCli-8.04.09-1.noarch.rpm ibm_fw_dsa_dsyt92o-4.01_linux_32-64.bin ibm_utl_asu_asut78c-9.21_linux_x86-64 ibm_fw_hdd_sas-1.11_linux_32-64.bin
18411	81021923	The issue experienced when the error about missing memory wasn't reported correctly during check to log file and added IMM logs into the service report file.
N/A	81022025	The trace level of Qlogic verification error was changed.
N/A	81022182	The typo in the check fence device messages was fixed.
17565	81021662	Changed the trace level of Logical connection creation from INFO to NOTICE for OST connection between the PT server and the host.

18289	81021891	OSTP sleep was added between retries to reopen session with host machines after failures. This fix is relevant for OST plugin only.
18882	81022357	The unbalanced situation of outgoing multi-destination replication was solved.
	81022471	Traces were added to help analyzing the ost protocol test failures.
19444	81022879	The UEFI settings were updated.
19360	81022836	An SNMP trap alert for the NR_INTERNAL_ERROR issue, which was caused as a result of replication failures, was added.
N/A	81022840	The SNMP package was updated: ptsnmp-ptsnmp00-1.0.25.x86_64.rpm
N/A	81022532	The native replication log errors category was updated in order to generate SNMP alerts for native replication failures errors.
16999	81021025	The issue experienced when a configuration session took more than 30 minutes during a repository creation was solved.
20423	81023073	The SM1 FW level was updated to BB28.
15825	81020264	An alert was added in the GUI for when increase capacity fails because there is not enough file system.
20120, 17464	81021321	The issue experienced when RAS reported "node came up after fencing" by email, while no fencing occurred, was solved.
20214	81023163	The issue experienced when the email configuration notification from the menu doesn't work properly was solved.
19221	81023126	The fence issue experienced during the service report collection was solved.
20019	81023271	The issue experienced when delete data takes a long time due to native replication database contention was solved.
19352	81022953	The native replication retry mechanism to solve load balancing issue of incoming/outgoing replication in Many-To-Many environments.
N/A	81019765	Optimization of firmware was added for the upgrade action.
N/A	81023694	Memory requirements were updated.
N/A	81023691	A new option was added: 'update_memory_requirements_file_max_tapes' to vtlutil utility. This method updated the memory_requirement.xml file in order to reduced the memory consumed by VTL tapes, according to the following logic: - The new limit will be between 128 and 256 and should be aligned with 32 (according to the current library configuration). - The new value cannot be less than the current number of

		<p>CONFIGURED tapes.</p> <ul style="list-style-type: none"> - If the calculation of the new limit is higher than the current limit no change will be done. - The backup configuration file with the current configuration will be generated as well.
20067	81022227	The issue experienced when the wrong message was displayed while trying to upgrade code was solved.
20847	81023801	The issue experienced when the "-recoverConatinerDb" flag of VTLUTIL utility doesn't work properly was solved.
20648	81023628	The issue experienced when the upgrade failed as a result of a CDROM location problem was solved.
20936	81023987	The issue experienced when the system wasn't rebooted after a kernel upgrade was solved.
20963	81024030	The issue experienced when a reboot occasionally failed due to slow systems (DD1 or SM1) was solved.

ProtecTIER driver issues:

Issue ID	Fix ID	Description
N/A	N/A	N/A

ProtecTIER Manager issues:

Issue ID	Fix ID	Description
13017	51004505	The size of the alerts window from the system view was changed.
15288	51004605	An option was added to run the replication of cartridges from shelf.
N/A	51004724	The dimming of colors in Replication Time Frame Scheduling Table was removed.
19489	51004999	The issue experienced when the ProtecTIER Manager, running on Windows hosts, does not show the correct version in the Control Panel, was solved.
15484	51004494	The display of some network configuration properties in Node View was fixed.
N/A	51005092	Storage saving and dedup monitoring was added.

Installation instructions

The IBM System Storage TS7600 with ProtecTIER Installation Roadmap Guide for the TS7650G (Gateway) [3958 DD4], GA32-0921, contains complete installation instructions.

Upgrading the TS7650G

To upgrade the TS7650G, choose one of the following options:

OPTION A: Upgrading a TS7650G with v3.1.X, v2.5, or 2.4 code installed

To upgrade from v3.1.X, v2.5, or 2.4, use the current code V3.1.14 and follow the procedure described in Chapter 3, "Upgrading Red Hat Linux and ProtecTIER," of the IBM System Storage TS7600 with ProtecTIER Software Upgrade and Replication Enablement Guide (SC27-3643).

OPTION B: Upgrading a TS7650G with v2.3 or v2.2 code installed

First upgrade to v2.4, then to v3.1.14.

1. Upgrade to v2.4 by using the procedure described in Chapter 6, "Upgrading and Configuring Red Hat Linux and ProtecTIER," of the IBM System Storage TS7600 with ProtecTIER Software Upgrade and Replication Enablement Guide (GC53-1196-02).
2. Upgrade to v3.1.14 as described in Option A.

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

Additional documentation

All ProtecTIER publications can be found in the IBM Publications Center. To access all publications, go to:

<http://www-05.ibm.com/e-business/linkweb/publications/servlet/pbi.wss>

1. Select your **country/region/language**.
2. Select **Search for publications** in the left menu.
3. Search for the publications by **publication title, keyword (for example, ProtecTIER), or form number**.

ProtecTIER Information Centers are available at the following at the following locations:

Information Center	URL
TS7610 and TS7620 Combined Customer Information Center	http://pic.dhe.ibm.com/infocenter/ts7610/cust/index.jsp
TS7650 Combined Customer Information Center	http://pic.dhe.ibm.com/infocenter/ts7650/cust/index.jsp
TS7610, TS7620, and TS7650 Combined Service Information Center	http://pic.dhe.ibm.com/infocenter/ts7600/serv/index.jsp

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.

Issue ID	Description	Workaround
13413	ProtecTIER DD4-x3850 fails to start after autorun.	Contact IBM Support to get the procedure on how to resolve this issue.
13550	ProtecTIER Manager (GUI) gets stuck after configuration session.	Close the ProtecTIER Manager (GUI) and reopen it.
13176	After the server is upgraded while PT Manager is running, the server version is incorrect.	Re-Log in to the system using ProtecTIER Manager (GUI).
13442	Server is fenced because of /pt_work full.	Contact IBM support.
14062	PT Server reboots unexpectedly during server replacement procedure.	Shut down the remaining node in order to avoid the fence, then repeat the procedure.
14528	During a firmware upgrade, an erroneous failure message is displayed.	This occurs only if the firmware upgrade procedure is initiated when the firmware is already at the latest level. The level of firmware on the storage system is not affected.
14205	The activities throughput may not be the same as shown on the bottom bar due to sync issues.	The issue is temporary.
14662	During "Update Firmware" using PT menu , the FW updating of RSA adapter may be hang without timeout	Contact IBM support.
14786	GUI hangs during long operations while the server notifies that it finishes	This is an XML-RPC communication issue. Perform the following to resolve the problem: <ol style="list-style-type: none"> 1. Go to "Start->Run->netsh" 2. Run "winsock reset" command Restart the PC

Compatibility

Compatibility requirements include the following:

- ProtecTIER v3.1.14.X works with TSSC code level 5.10.8 or later.
- ProtecTIER v3.1.14.X requires the use of ProtecTIER Manager v3.1.14 or later.
- ProtecTIER Manager earlier than v3.1.8 is not compatible with ProtecTIER Server v3.1.14.X. 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 is NOT supported.
- Replication configuration operations require the use of Replication Manager v3.1.14 or later ProtecTIER software.

OpenStorage compatibility:

- ProtecTIER Server v3.1.14.X is compatible with plug-in 2.5.0.0 or later.
- ProtecTIER plug-in v3.1.11 is compatible with ProtecTIER Server v2.5 or later.

Compatibility matrix:

The compatibility matrix can be found at:

<http://www-03.ibm.com/systems/storage/tape/index.html>

Look under the heading “Virtual tape systems” and click on the appropriate product to find a link to the Independent Software Vendor (ISV) and interoperability matrix.

Documentation format and accessibility

The publications for this product are in Adobe Portable Document Format (PDF) and should be compliant with accessibility standards.

If you experience difficulties when you use the PDF files and want to request a web-based format or accessible PDF document for a publication, send a request by email to starpubs@us.ibm.com. In the request, be sure to include the IBM publication number and title.

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