VTrak® D5000 Series

D5000 SR2.1 Release Notes

FW 13.05.0000.09

R1.00 – 09/12/2023

This document is applicable to the following PROMISE VTrak D5000 series models:

Model	Description
D5800xD	4U/28 iSCSI, Dual controller
D5800xS	4U/28 iSCSI, Single controller
D5800fxD	4U/28 FC/iSCSI, Dual controller
D5800fxS	4U/28 FC/iSCSI, Single controller
D5600xD	3U/16 iSCSI, Dual controller
D5600xS	3U/16 iSCSI, Single controller
D5600fxD	3U/16 FC/iSCSI, Dual controller
D5600fxS	3U/16 FC/iSCSI, Single controller
D5300xD	2U/12 iSCSI, Dual controller
D5300xS	2U/12 iSCSI, Single controller
D5300fxD	2U/12 FC/iSCSI, Dual controller
D5300fxS	2U/12 FC/iSCSI, Single controller
D5320xD	2U/24 iSCSI, Dual controller, 2.5” Drive Bays
D5320xS	2U/24 iSCSI, Single controller, 2.5” Drive Bays
D5320fxD	2U/24 FC/iSCSI, Dual controller, 2.5” Drive Bays
D5320fxS	2U/24 FC/iSCSI, Single controller, 2.5” Drive Bays

The supported Expansion subsystems include:

Vendor	Platform	Description
Promise	VTrak J5320s	2U/24-bay JBOD, 12Gbs SAS to 12Gbs SAS (or 6Gbs SAS/SATA), 2.5” Drive Bays
	VTrak J5300s	2U/12 JBOD, 12Gbs SAS to 12Gbs SAS (or 6Gbs SAS/SATA)
	VTrak J5600s	3U/16 JBOD, 12Gbs SAS to 12Gbs SAS (or 6Gbs SAS/SATA)
	VTrak J5800s	4U/24 JBOD, 12Gbs SAS to 12Gbs SAS (or 6Gbs SAS/SATA)
	VTrak J5910s	4U/60-bay JBOD, 12Gbs SAS to 12Gbs SAS
	VTrak J5920s	4U/102-bay JBOD, 12Gbs SAS to 12Gbs SAS
	VTrak J5960s	4U/60-bay JBOD, 12Gbs SAS to 12Gbs SAS

1. Revision History

Build Date	Type	Release	Revision	Description
2018/10/19	Service Release	SR1.1	13.02.0000.05	First D5000 channel release
2019/01/10	Hot fix	SR1.1.1	13.02.0000.14	Bug fix
2019/04/19	Service Release	SR1.1.2	13.02.0000.18	Bug fix New feature to support J5910/J5920 for specific region
2019/06/28	Hot fix	SR1.1.3	13.02.0000.27	Bug fix
2019/08/14	Service Release	SR1.2	13.03.0000.12	Bug fix New features, including Standard Pool/Volume, Block VAAI, NAS VAAI, File Manager for NAS ACL, Volume Replication. * Downgrading from SR1.2 to lower revision not allowed.
2019/12/01	Service Release	SR1.3	13.04.0000.06	1. Bug fix 2. New features, including Local/Remote Thick Clone, Phone Home, Cloud Backup, WORM, Compression and De-dup. 3. Improvement for the existing features, like ACL and SMB options. * The new features will not work after downgrade from SR1.3 to lower revision.
2020/01/22	Service Release	SR1.3.1	13.04.0000.11	1. Bug fix 2. Support NAS Share on Standard Pool, which is more suitable for media streaming application.
2020/04/28	Service Release	SR1.3.2	13.04.0000.13	1. Bug fix 2. Support Promise STSB (6G SAS to SATA bridge board) .
2020/05/28	Hot fix	SR1.3.3	13.04.0000.16	1. Bug fix
2020/10/16	Hot fix	SR1.3.4	13.04.0000.20	1. Bug fix
2021/01/22	Hot fix	SR1.3.5	13.04.0000.22	1. Bug fix
2021/05/07	Service Release	SR1.3.6	13.04.0000.25	1. Function improvement and bug fixes
2021/10/28	Hot fix	SR1.3.7	13.04.0000.29	1. Bug fix
2022/05/20	Service Release	SR1.5	13.04.0000.36	1. Support VTrak J5960 4U60bay HD JBOD 2. Function improvement and bug fixes * The new features will not work after downgrade FW to lower than SR1.3.
2022/09/08	Hot fix	SR1.5.1	13.04.0000.38	1. Bug fix
2022/11/11	Hot fix	SR1.5.2	13.04.0000.42	1. Bug fix
2023/02/14	Hot fix	SR1.6	13.04.0000.46	1. Bug fix
2023/08/10	Service Release	SR2.0	13.05.0000.08	1. Function improvement and bug fixes
2023/09/05	Hot fix	SR2.1	13.05.0000.09	1. Bug fix

2. SR2.1 Release Summary

VTrak D5000 firmware version 13.05.0000.09 included following bug fixes.

2.1. Fixed issues

No.	Ref #	Description	Workaround/Solution
1	RB-270157	VMware Datastore on Adv. Volume may get wrong AST lock.	The issue was caused by AST lock command processing on Adv. Volume is not correct. Fix this issue by correcting the flow of compare and write command.
2	RB-270102	The 10G iSCSI write throughput from standard pool will downgrade to 300MiB/s when controller battery is absent or malfunction.	The slow write throughput issue occurs on conditions of controller cache policy write through and handle write I/Os. In this case, battery malfunction (or battery absent) will cause controller cache policy become write-through. Fix this issue by enhanced full stripe write process for write-through case.
3	RB-270058	File copy from local disk/SUB drive to NAS share showing file number/ size difference	The issue was caused by abnormal File ID within DOS attribute will cause Windows 10 explorer behavior strangely. Fix this issue by modify samba related process to ignore File ID within DOS attribute.
4	RB-270093	When transition is paused, then NAS share folder is unmounted, this triggers transition to continue running.	This issue was caused by the pause/resume state is not being processed from peer controller and watermark. Fix this issue by checking if the pause/resume comes from peer controller and also process the pause state from watermark.
5	RB-270209 RB-270217	Hit "Failed to pause Transition: Operation failed. Usually due to	This issue was caused by the PDM structure not being set correctly

No.	Ref #	Description	Workaround/Solution
		some system error (0x105)" and Dashboard/BGA page response slowly.	when PDM changes to rebuild. Fix this issue by setting the correct value in the PDM structure.
6	RB-270281 RB-270292	All Volume/NAS I/O stuck while triggered "PDM is switched to rebuild" for CTRL 2(Secondary) owned Pool.	This issue was caused by primary controller pausing I/Os before processing of backend error handled to problematic PD, but secondary controller handle Host I/Os to specific Pool which includes problematic PD as a member. Fix this issue by checking if the error handle happens on the controller which is not running Rebuild / Transition / PDM, just leave it for peer to handle.

3. SR2.0 Release Summary

VTrak D5000 firmware version 13.05.0000.08 included following function improvement and bug fixes.

3.1. Function improvement

Ref #	Feature	Description
RT-40072	Support J5960 lite version	Support lite version of J5960 (4U 60 bays HD JBOD) for VTrak D5000 series product.
RT-40376	Support new 2U Power FRU	Support new 2U Power FRU (installed ASPower 800W CRPS PSU) for VTrak D5805/D5800/D5600/J5800/J5600 series product

3.2. Fixed issues

No.	Ref #	Description	Workaround/Solution
1	RB-269956 RB-269328 RB-268496 CRM 20230102061127S	Heavy NFS NAS I/Os may cause high memory utilization and then cause NAS share un-mount or indicate Controller is not present unexpectedly.	The issue is caused by insufficient free memory and inefficient memory management after heavy NFS NAS I/Os. Fix this issue by applying Linux patch related to memory process for nfsd.
2	RB-268639	Hit "Pool missed" issue during	The issue is caused by metadata

No.	Ref #	Description	Workaround/Solution
	RB-269005	abnormal power cycle subsystem during I/O running.	corruption in the file system when unexpected power cycle occurred during heavy I/Os. Under worst conditions, data in PD cache is lost after subsystem power loss, the ZFS/XFS metadata will be lost and cause import failure in next power on initialization. Fix this issue by adjusting PD write cache policy. 1. For Advanced pool: Disable PD write cache to protect data. 2. For Standard pool: Enable PD write cache, flush metadata to protect data.
3	RB-269166 RB-269839	SSH/SSL/TLS related Security Vulnerability	Analysis security issues from security scanning reports. Fix SSH/SSL/TLS related security issues by upgrading new software version and adjust settings. 1. Upgrade nginx version to 1.24.0, upgrade related libs pcre to pcre2-8, libidn to libidn2 2. Upgrade dropbear version to 2022.83; Disable SHA1 3. Upgrade openssh to 8.9 4. Block thick clone port in management port. 5. Set a flag for netlink process after set thick clone setting. 6. Modify FTP and HTTPD and thick clone config. 7. Set TLSv1.2 for samba and ftp 8. Set TLSv1.2 for nginx. 9. Bypass Diffie-Hellman in FTP config. 10. Add ssh config for SFTP.
4	RB-268776	VTrak D5800 access to one iSCSI Volume from two different hosts is not possible	The issue caused by D5800 recording 32 bytes of iSCSI initiator alias name. In this case, user has two or more Linux based Hosts, each has iSCSI client and with longer initiator alias name, the D5800 recorded first 32

No.	Ref #	Description	Workaround/Solution
			bytes of initiator alias from logged in iSCSI initiator and the same content causes application issue. Fix this issue by increasing maximum length of iSCSI initiator alias name to 255 bytes.
5	RB-268717 CRM 20230106113707S	Intermittent performance issues and performance graph data is wrong.	Resolved this issue by making the following changes: 1. Remove unnecessary task. 2. Correct the latency unit for calculation. 3. Correct the wording of IOPs related info.
6	RB-269345	Domain name of default email address and trap sink exists, they may be receiving email.	This is a suggestion to prevent receiving email from yourcompany.com if user keeps the default value of email address admin@yourcompany.com in user or snmp settings. Fix this issue by changing the default email address from admin@yourcompany.com to admin@your-company.com used in user/snmp modules.
7	RB-269476	About the problem of slow response of information acquisition via SNMP	Root cause： When fixing issue of snmpagent used memory size always increasing. Add handler of gc.collect() to force release of memory used in snmpagent. Remove the gc.collect() used in get_fpoint/get_npoint/table_handler. It will greatly increase the response time of snmp commands. Solution： Only need to force release memory for getting module data.
8	RB-269728	User may encounter garbled file names when using the FTP tool to upload Simplified Chinese files under the Windows system.	The issue caused by some localized application which created files with special encoding incompatible with UTF-8, causing problems. Fix this issue by allowing user to rename file name and then transfer to UTF-8 format

No.	Ref #	Description	Workaround/Solution
9	RB-268956 RB-267875 CRM 20220504092600S, 20220715102924S	Customer using SNMP to monitor the storage status. Customer encountered SNMP is not returning LD and drive response time, just returning zero for all drives.	This is FW/SW improvement for PD, Volume and FC port latency calculation and display. Before this improvement, the latency calculation unit used is milliseconds, and latency display on GUI performance monitor may be incorrect when latency is very low. Fix this issue by adjust latency calculation unit from milliseconds to microsecond, and correct display wording, Resolved this issue by making the following changes: 1. Use microsecond as calculation precision for LD/drive related latency and bandwidth. 2. Reduce some process overhead for performance monitor. 3. Change related display on GUI performance monitor page. The unit of latency/max latency/min latency is µs (micro second).
10	RB-270093	User paused PDM / Transition may be resumed unexpectedly by system.	The issue is caused by user pause flag is not set properly and the BGA resume operation will not recognize the pause is from user and resume it. Fix this issue by setting the user pause flag correctly.

4. SR1.6 Hot Fix Release Summary

VTrak D5000 firmware version 13.04.0000.46 included some bug fixes.

4.1. Fixed issues

No.	Ref #	Description	Workaround/Solution
1	RB-268160	A permission issue occurred when copying files on MAC client with NT ACL enabled	The issue caused by Samba server on storage, will check some flags for MAC client when copying files, non-handle on error conditions process will cause assertion fail. Fix this issue by: Making code changes to bypass fsp pointer checking when the flag set_inherit_acl is not set.
2	RB-268345	CRM 20221215181103S: NAS Share became damaged after capacity expansion failure while the repair option is running	This issue was caused by: User executing NAS share capacity expanding process, but longer process causes timeout by xfs_growfs. When process is in abnormal condition of xfs_growfs timeout, there is a wrong xfs handle flow to rollback volume manager, and ultimately it causes xfs_growfs failure. Please note this abnormal condition only occurs on an XFS NAS share created from a standard Pool, it has no effect on advanced NAS created from advanced Pool. Solution: 1. Set timeout to None when xfs_growfs extending NAS share capacity. 2. Bypass the xfs_dir3_block_verify while the specific folder being mounted as read-only for the recovery process.
3	RB-267357	Windows OS encountered errors while copying files which added extended attributes	Customer facing issue while copying files to XFS nasshare via SAMBA, few files are copying and have errors. After debug, it's related to a Windows xattrib issue. Fix this issue by: 1. Fix SAMBA module cannot handle Apple stream from Windows OS. 2. Do not remove netatalk , afpinfo attrib for Windows OS read operation. 3. Bypass NT_STATUS_NOT_FOUND error when doing delete_all_streams process. 4. Change NT status to NT_STATUS_OK if delete stream has returned an

No.	Ref #	Description	Workaround/Solution
			NT_STATUS_NOT_FOUND status.
4	RB-267749	The controller may watchdog unexpectedly after receiving invalid packet while handle iSCSI I/Os. The issue only occurred on every Saturday's 2:00AM at customer's environment.	This issue was caused by: 1. CTRL received invalid iSCSI packet from tcp port 3260, wrong packet may cause CTRL no response and watchdog unexpectedly. 2. Further inquiry and checking to see if there were any scheduled network related tasks starting by every Saturday's 2:00AM, customer has confirmed security scanning software is executed at that time. 3. After debug, the invalid iSCSI packet is sent by security scan software, which causes CTRL no response and watchdog. Fix this issue by: 1. Filter out invalid packet which received via tcp port 3260. 2. Enhance iSCSI login error handling.
5	RB-268548	NAS Share ACL permission issue: deleted files in recycle bin can be accessed by other users without permission. This bug only occurs on posix ACL mode and enabled samba trashcan (recycle bin). All deleted folders/files have no ACL setting when they are moved to recycle bin.	This issue was caused by deleted files in recycle bin having no ACL setting, so SW handles cannot get ACL setting with 'recyclebin' in the query path. Fix this issue by: 1. If client asks ACL within recycle bin, then cut the recyclebin string from full_path variable.

5. SR1.5.2 Hot Fix Release Summary

VTrak D5000 firmware version 13.04.0000.42 included some bug fixes.

5.1. Fixed issues

No.	Ref #	Description	Workaround/Solution
1	RB-267543 RB-266557 RB-266727 RB-267537	Unexpected memory management may cause GUI/CLI become nonfunctional or no response while handling I/Os	There are two issues for this problem. 1. Unsuitable parameter while mounting filesystem. 2. Executing CLI login script incorrectly and repeating re-login process has consumed

No.	Ref #	Description	Workaround/Solution
			memory resources. Fix this issue by: 1. Adjust filesystem mount parameter. 2. Modify cli login handle scheme to release allocated memory when failure on login process.
2	RB-267689	Unable to assign group ACL for nas share	The issue was caused by: 1. The ACL setting function does not query user/group ACL with correct ALC type, then loses group ACL setting in GUI. 2. The ACL setting function was sorted by user/group name in GUI, while MW result was sorted by uid/gid. 3. The ACL setting function does not filter user/group name properly, sometimes it will return empty result. Fix this issue by: 1. Fix query user/group with ACL type. 2. Sort ACL result by user/group name. 3. Fix filter function bug.
3	RB-267942	Language selection on WebPAM GUI. Current is display English by default. Customer has a request to auto select and display prefer language while start up WebPAM GUI.	Fix this issue by: 1. When user start up WebPAM GUI, D5000 SW will read language preference from Web Browser and then set the default language of the page to the browser language. 2. WebPAM GUI will display default English language when Browser's prefer language is not in supported language list (English, Spanish, Deutsch, Japanese, Korean, Traditional Chinese, Simplified Chinese)
4	RB-267766	VM migration failed between two subsystems.	The VM migration between two subsystems is not supported, but firmware does not return proper status while processing vaai xcopy command that issued by VMware. Fix this issue by returning correct status for the xcopy command that issued by VMware.

6. SR1.5.1 Hot Fix Release Summary

VTrak D5000 firmware version 13.04.0000.38 included some bug fixes.

6.1. Fixed issues

No.	Ref #	Description	Workaround/Solution
1	RB-267081	CRM 20220715080313S: Both controllers rebooting. some show watchdog resets Customer encountered controllers rebooting problem while copy files to XFS nasshare at Mac OS client, the macOS uses extended attributes with most files and folders.	After debug, this issue only happened with Mac, Windows and Linux are fine, the issue will not happen with NFS, only SAMBA is affected. Root cause: setxattr with no permission function gets kernel panic in XFS. Fix this issue by: 1. MAX value (64K) space for kernel to fill the xattr. 2. Modify wrong logic of unsigned integer comparison to resolve double free exception.
2	RB-267357	Windows OS encountered errors while copy files which added extended attributes	Customer facing issue while copying files to XFS nasshare via SAMBA, few Files are copying and few files get error. After debug, it's related to windows xattrib issue. Fix this issue by: 1. Fix fruit module cannot handle Apple stream from Windows OS. 2. Do not remove netatalk , afpinfo attrib for Windows OS read operation.
3	RB-266621	CTRL 2 [Kernel panic] while setup a iSCSI session via CTRL 2 owned IO Portal with iSNS CHAP.	Issue may occurred unexpectedly when setup and enable iSNS CHAP Authentication. Fix this issue by: 1. Set server info only when enabled iSNS. 2. Fix pointer not initial issue. 3. Correct the PDU size in check flow.
4	RB-266970	CPU/Memory monitor with SNMP OID Customer has request to inquiry CPU and memory usage via SNMP	Fix by add new SNMP table for CPU and memory usage info. 1. Add DS controller performance support in MIB file 2. Add CPU/memory usage support in SNMP

No.	Ref #	Description	Workaround/Solution
			3. New OID: 1.3.6.1.4.1.7933.1.20.2.202.6 Please use new revised MIB file for applications.
5	RB-266971	Critical Security Vulnerability - SMB version 1 and 2 are enabled by default. Customer has request to disable unsecure SMBv1 by default	Fix by 1. GUI: Add 'Server Min Protocol' option in SMB protocol setting page. 2. CLI: Add 'Server Min Protocol' item to display in SMB info. Add new parameter 'min_protocol' support for SMB get/set on SW side
6	RB-261281 RB-267130	Unexpected ext4 crash caused Ctrl1 be restart automatically. The subsystem may occurred unexpected crash while process Ext4 internal device. It's low possibility to hit issue, and it may compatible issue between Ext4 device and older kernel version.	After research, it's application risks when used ext4 in kernel 3.10. Workaround it by change internal filesystem from ext4 to ext3. Workaround this issue by changing internal filesystem from ext4 to ext3.
7	RB-266602 RB-266391	Multiple users tried writing onto standard pool, the NAS is disconnected	The unexpected NFS I/Os stuck, XFS assertion or Ctrl restart may related to XFS superblock version. After research, the superblock v5 of XFS may encountered risks when application at kernel 3.10 Workaround it by changing XFS superblock version from V5 to V4 Please use SR1.5.1 FW to prevent this issue.
8	RB-266728	Event logs were cleared after "shutdown" subsystem via GUI. (via CLI command is no problem.)	After debug, the issue cause by state of stdin will be None when script execute shutdown process which called from GUI. Fix this issue by modify script to call Popen with stdin=PIPE, and prevent empty varlog be backup.
9	RB-266822	Event time is not correct Issue duplicate step: 1. Remove ctrl 1 management port ethernet cable, wait it failover to ctrl 2.	After debug, the issue cause by rpc server cannot change date or timezone. Fix this issue by restart rpc server when change date or timezone,

No.	Ref #	Description	Workaround/Solution
		2. Connect the management IP again, and check the event. 3. The event time is wrong.	calling new mapi to restart rpc on both controllers.
10	RB-253567 RB-257528 RB-267295 RT-39519	Customer is unable to configure email for Office 365 email. Customer is asking for TLS support in email option. Some email servers require TLS but not SSL. TLS should be an option in email service setting.	Support new TLS option for Encrypt Connection in email service setting. Fix by: 1. Assign port value for following different encrypted connection options: None (port 25), SSL (port 465), TLS (port) 2. Add encrypt option (None/SSL/TLS) in "swmgt -n email" on CLI. 3. Change the 'Secure Sockets Layer' to 'Encrypt Connection' and add 3 options (None/SSL/TLS) on GUI Email setting page.

7. SR1.5 Release Summary

VTrak D5000 firmware version 13.04.0000.36 included function improvement and bug fixes.

7.1. SR1.5 Function improvement

Ref #	Feature	Description
RT-37182	Support VTrak J5960 in VTrak D5000/E5000 and Vess R3000 Series	1. Support VTrak J5960 4U60bay HD JBOD. 2. Each J5960 supports a Petabyte of storage capacity in a compact form factor with scalability potential to over 8 Petabytes for 8 sets of J5960 cascaded to VTrak D5000/E5000 and Vess R3000 product.
	Upgrade SNMP MIB file for D5000/R3000 series product	1. Convert specific type of value returned from mapi that did not match the MIB definition. 2. Correct the parameter name of ratio used in nasshare table. 3. Update copyright and fixed some compile error for MIB file.
	Upgrade Samba	1. Upgrade version to Samba-4.13.3 2. Apply patch for Samba security issue CVE-2021-44142 for RB-266373
	Upgrade nginx	1. Upgrade version to 1.20.2 2. Fixed nginx security issue (CVE-2021-23017) for RB-265995
	Add Alias parameter for initiator setting for helpful identify	1. Add Alias option for GUI/CLI initiator settings. 2. Allow Alias parameter up to 47 characters long, containing alpha-numeric characters, blank spaces and underscores.

Ref #	Feature	Description
	FC/iSCSI initiator in LUN map operations	
	Improve login process, password protection, make more secure and robust	1. Use basic password security to prevent brute force attacks. If wrong password entered up to 5 times, the system will prohibit the login within 5 minutes. 2. User can choose and set password complexity requirements, the default is the current password status. Low complexity: 1-31 characters High complexity: 8-31 characters, must contain upper and lower case letters, numbers, special characters. The administrator can change the password, create a new user, and other users can set the low/high complexity password normally. 3. User can enable and set the password login validity period, and it is not set by default.

7.2. SR1.5 Bug Fixes

No.	Ref #	Description	Workaround/Solution
1	RB-265499	iSCSI issues in VMware environment. Getting multiple State-in-doubt and disconnect errors in VMware hosts that are iSCSI connected to RAID.	The issue cause by FW replied with wrong data to host while processing VAAI command. Apply FW fix by correct process flow for RECEIVE_COPY command, so that the correct data is returned to host.
2	RB-261637	CRM 20210623040858S: Unable to nfs mount exported folder from Windows client.	The issue caused by incorrect ACL mode that MW reference it from NFSv3. Apply MW fix by get ACL mode from filesystem while doing nfs mount process
3	RB-261426	Multiple HDD failure When user enabled PowerSavingStandbyTime in controller settings, multiple HDDs may report error and be marked as offline.	This is command execution related handle to cause HDD report error. Apply FW fix by using a flag to check and prevent multiple access.
4	RB-266056	Add SAS 24G display support	The GUI/CLI will display SAS 12G link speed and correct PD info when installed PD is SAS 24G HDD or SSD.
5	RB-261571	CRM 20210621082009S: Unable to sync NAS share to Cloud (dropbox)	The issue caused by MW got "too_many_requests" errors from Dropbox while uploading files.

No.	Ref #	Description	Workaround/Solution
			Apply MW fix by adding error handling for "too_many_requests. Try to upload file again after waiting 60 seconds. If same error occurs, then extend wait time for 120, 240, 300 seconds in sequence.
6	RB-261536	CRM 20210616085544S: Controller 1 restarted for unknown reason and controllers did not rejoin the domain after failback.	One issue is domain join related, it can be improved by MW. Apply MW fix by (1). Open portal before joining domain. (2). Add except handle for import setting.
7	RB-265717	Volume#1 is un-exported status after controller failover	The issue caused by MW, it has no export standard volume during failover process. Apply MW fix using check/export both standard and advanced volumes during handling failover
8	RB-266391 RB-266602	The NAS NFS I/O not efficient and may get stuck during heavy I/Os.	The NAS NFS I/O stuck issue caused by not enough free memory and memory management inefficiency. Fix inefficient memory issue by adjusting kernel memory management parameter min_free_kbytes from 512MB to 1GB.
9	RB-257190	Windows ACL: change folder owner's ACL not working; always shows folder owner's ACL as "advanced"	User cannot set ACL permission again when changed folder owner's ACL permission from RW to RO. This issue caused by MW appending all owner's ACLs into setting list after user changed the change folder owner's ACL Apply MW fix, do not append all owner's or owner group's ACLs into setting list.
10	RB-260901	CRM 20210113130514S - Unable to access NAS share: Domain joined, but no domain user be discovered	The issue caused by allocated resources are not enough to process of large amount group/user list that returned by DC. In this case customer’s group has more than 10000 members, which is beyond

No.	Ref #	Description	Workaround/Solution
			limit 10000 and large group/user value cause SQL command runs failed and winbind poll command got timeout. Fix issue by improve MW handle flows to process more than 10000 group members.
11	RB-266588	CRM 20220511093236S: Unable to join domain	User cannot join their Active Directory domain by GUI, get error message “Failed to Join Domain . Please check NetBIOS Name (Error 0X4100107)" The issue cause by valid characters checking for NetBIOS parameter on GUI. The NetBIOS name checking will not allow special character and over than 16 characters string. Apply SW fix by checking max 16 characters length of NetBIOS name and can contain all of characters.
12	RB-266612	No "iSNS" and "CHAP" related information in the Service Report.	User cannot find "iSNS" and "CHAP" related info from Service Report. Apply SW fix to add 'iSCSI iSNS Info' and 'iSCSI Chap Info' into service report.

8. SR1.3.7 Hot Fix Release Summary

VTrak D5000 firmware version 13.04.0000.29 included bug fixes.

8.1. Fixed issues

No.	Ref #	Description	Workaround/Solution
1	RB-262225 RB-265462	VMware application may get stuck after completing R5 (or R50) pool rebuilding process. The issue caused by R5/R50 rebuild improvement in SR1.3.6 (FW version 13.04.0000.25), the improvement has risks when firmware process of host IO’s LBA	These risks only occur at SR1.3.6 in condition of rebuild R5 (or R50) advanced (or standard) pool and firmware process of Host I/O’s LBA overlaps with rebuild LBA on the rebuild disk. Please upgrade FW to this SR 1.3.7 or new SR FW when SR1.3.6 FW running at D5000

No.	Ref #	Description	Workaround/Solution
		overlaps the rebuild progress, the IO or parity data may not write to the rebuilding disk.	subsystem.

9. SR1.3.6 Release Summary

VTrak D5000 firmware version 13.04.0000.25 included function improvement and bug fixes.

9.1. SR1.3.6 Function improvement

Ref #	Feature	Description
RT-36729	Update SAS3008 FW	Update SAS3008 FW from phase12 to phase16.00.10.00
RT-37051	Improve Pool creation handle flows	Improve GUI handle flows while creating new Pool. a). Set Pool type default value to Standard Pool. b). When customers click button to create new Pool, GUI will pop up a notification window guides customers to choose Advanced or Standard pool and then determine the best one for their application.

9.2. SR1.3.6 Bug Fixes

Ref #	Description	Fixed Revision
260489	Fix SMB and WWW security related issues	13.04.0000.25
261152	Fix controller watchdog and reset after DMA busy occurred under the process of R50 sync and heavy NFS I/Os	13.04.0000.25
260945	Fix controller boot failure after completing thick clone and snapshots tasks.	13.04.0000.25
261007	CRM 20210222074137S: summary and display Pool, Volume, NAS share's Compression Ratio in CLI, GUI and service report	13.04.0000.25
261143	Add hidden option of -a nslookup to CLI domain command to provide nslookup information to debug joining domain related issues.	13.04.0000.25
260883	Fix the problem of target Pool's not being selected while creating Thick Clone tasks	13.04.0000.25
261255	The df & du used capacity is not consistence under Advanced pool of nas-share	13.04.0000.25

10. SR1.3.5 Release Summary

VTrak D5000 firmware version 13.04.0000.22 included some bug fixes.

10.1. SR1.3.5 Bug Fixes

Ref #	Description	Fixed Revision
260535	Fix Snapshot unable to be displayed completely during scheduled Thick Clone tasks running.	13.04.0000.22
260465	Fix Scheduled (type as "Minute") Thick Clone tasks stop executing after deleted a Volume/NASshare.	13.04.0000.22
260209	Add new event to add/modify WORM operations	13.04.0000.22
254155	Improve user account security and management. (1. Add 'Password Strength' option to increase password complexity. 2. limit the number of user login failures)	13.04.0000.22
36480	Remove memory cache (the media type option is memory) and related operations.	13.04.0000.22
259482	Improve BE handle for CRM 20200916134016S: J5920 drives missing, most JBOD drives unconfigured.	13.04.0000.22
260519	Fix WORM Expire date alteration to incorrect value when modified WORM retention period setting	13.04.0000.22
260365 260372	Fix FC login related issue	13.04.0000.22
260396 260656 260541 259163	Trigger Ctrl into maintenance mode when BE driver detected SAS IOP become fault.	13.04.0000.22

11. SR1.3.4 Release Summary

VTrak D5000 firmware version 13.04.0000.20 included some bug fixes.

11.1. SR1.3.4 Bug Fixes

Ref #	Description	Fixed Revision
258589	CRM 20200806114538S: unable to join AD domain, fails for login failure.	13.04.0000.20
258653	Failed to delete "Data Sync Portal" via GUI and CLI command.	13.04.0000.20
259155	CRM 20200818125033S: iSCSI application issue in ESXi 7.0: variations of WARNING: iscsi_vmk: iscsivmk_ConnCommandResponse:2861: SCSI command (opcode=0x84) completed successfully without enough data: 0 < 44 on all of esx hosts.	13.04.0000.20
259445	CRM 20200915064024S: AD does not update and group permissions do not work.	13.04.0000.20
257702	CRM 20200504082654S: watchdog reset on controller 2	13.04.0000.20
257972	Upgrade the nginx version to 1.18.0 for web server security issue.	13.04.0000.20

Ref #	Description	Fixed Revision
33502	Support a minutes schedule type (option of 10、30、60 minutes) for D5000/R3000 Thick clone task.	13.04.0000.20
255126	CTRL1 stay in 'This controller was (held on) reset by the partner controller' after DIU FW update	13.04.0000.20
258397	The volume becomes read only in Linux Host after completed remote migration during I/Os	13.04.0000.20
259073	Pool operational status stayed in transferring after FO/FB by 'shutdown -a restart -i 2'	13.04.0000.20
258832	Resume thick clone operation fails when source pool goes offline	13.04.0000.20
259075	Unexpected "Object of type 'Exception' is not JSON serializable " error while process of remote thick clone tasks	13.04.0000.20
252528 254616	Add new event for unexpected connection with JBOD (wrong SAS topology)	13.04.0000.20
258858	NAS share in inoperable state after user takes PDs offline, then forces online PD volume into critical status	13.04.0000.20
259098 258607 258445 258722 258767	Improve thick clone related handles	13.04.0000.20
254430	Failed to delete "Data Sync Portal" via GUI and CLI command.	13.04.0000.20
258601 258768	Improve NAS share related handle for capacity/usage display issue and user quota management	13.04.0000.20
259168	Improve SMB related handle to prevent high memory usage and unexpected smbd panic during SMB I/Os.	13.04.0000.20

12. SR1.3.3 Release Summary

VTrak D5000 firmware version 13.04.0000.16 included some bug fixes.

12.1. SR1.3.3 Bug Fixes

Ref #	Description	Fixed Revision
257416	Can't create new NAS share, GUI displays "NAS share capacity exceeds the maximum." if first selected group is smaller than 1GB capacity Pool, then another one is selected.	13.04.0000.16
257832	Unable to send out email notification but test email is fine	13.04.0000.16
257932	NASShare operation will not send out SNMP trap immediately but follow the next SNMP trap.	13.04.0000.16
257817	Fix for AL-FTP tool compatibility issue.	13.04.0000.16

Ref #	Description	Fixed Revision
248196	NAS IO should not be allowed through management portal IP.	13.04.0000.16

13. SR1.3.2 Release Summary

VTrak D5000 firmware version 13.04.0000.13 included Promise STSB (6G SAS to SATA bridge board) and bug fixes.

13.1. SR1.3.2 New Feature

Ref #	Feature	Description
RT-34449	Promise STSB	Promise STSB (6 Gbps SAS to SATA bridge board) support. It is used to replace the Blackjack board, which is EOL.

13.2. SR1.3.2 Bug Fixes

Ref #	Description	Fixed Revision
256058	Pool might become “Unavail” after I/O running over 65 hours.	13.04.0000.13
255046	In FC loop topology with Windows client, IO might stop after restarting both controllers in sequence.	13.04.0000.13
256198	Event logs not correct while "PDM" process triggered. It shows "Rebuild cannot be started on a smaller size PD".	13.04.0000.13
255962	System might fail to boot up after firmware update, if there is malfunction PD in the enclosure.	13.04.0000.13
256035	Instant rebuild is not started only when spare drives are plugged in.	13.04.0000.13
254822	If there are large amount of Standard Volume, slave controller might get stuck when booting	13.04.0000.13
256208	When using Standard Volume, data might temporally not be able to sync after controller failover.	13.04.0000.13
255893 255863	When SSD Read Cache is configured, performance might drop dramatically and CPU usage remains 100% after restart CTRL1	13.04.0000.13
256229	I/O to the NAS Share (owned on CTRL 2) will stop running while restarting CTRL 1. (FOFB)	13.04.0000.13
255415	Can't click Send Test Email button after save email configuration	13.04.0000.13
256471	Scheduled Remote Thick Clone tasks can't work after shutdown and then restart destination subsystem.	13.04.0000.13
256239	NAS user/group ACL information is incorrect, when the corresponding group ACL is configured.	13.04.0000.13
256329	ACL page cannot show NAS user account information while boot up, but renew the page can work.	13.04.0000.13

Ref #	Description	Fixed Revision
256339	GUI File Browser response is slow when there are over 10,000 files in the folder.	13.04.0000.13
256457	Clear ACL in GUI, the “Deleting” status showing in wrong raw.	13.04.0000.13
256620	The tip appears garbled when invalid character is used in NAS folder name.	13.04.0000.13
255768	Cannot create Advanced pool while heavy I/Os with 5 more pools	13.04.0000.13
255968	PD become PFA after repeat create pool, remove PD, delete pool and insert PD	13.04.0000.13
256045	Fail to NDIU from SR1.1.1 to SR1.3	13.04.0000.13
256310	Ctrl1 stayed in 'This controller was (held on) reset by the partner controller' after 'shutdown -a restart -i 1' during FOFB test	13.04.0000.13
255530	PD medium error cause I/O stop .	13.04.0000.13
256729	IO stopped during failover/failback and both Ctrl1&2 were on rolling reboot.	13.04.0000.13
256797	Inconsistent blocks (truly inconsistent) during Write-Hole test.	13.04.0000.13
256047	CTRL1's standard pool became missed after normal IO and restart it by GUI	13.04.0000.13
256060	CTRL can't boot up (stop at starting i2), after NDIU from SR1.1/1.2 to SR1.3	13.04.0000.13
256092 256096	CTRL2 can't boot up, after NDIU update FW from FCS to SR1.0, or SR1.1 to SR1.3.1	13.04.0000.13
256138	set ACL (windows ACL) it stay in "ACL queue" for long time and didn't apply to NAS share	13.04.0000.13
256167	Posix ACL setting(user1/Read-Write) was gone after NDIU upgrading from SR 1.1 to SR1.3.1	13.04.0000.13
256210	Fail to extend standard NAS share capacity	13.04.0000.13
256032	GUI display “Disable-Running” status after disabled NFS protocol	13.04.0000.13
256039	ACL deadlock and all folder in “Adding” state after assigned permission to a folder	13.04.0000.13
255760	Where there is Incomplete Pool, GUI may pup up alert message “could not convert string to float: (0x4100104)” when click Pool icon	13.04.0000.13
256342	Create standard NAS share success but the share didn't appear in subsystem	13.04.0000.13
256345	Import License successfully, but current license information is "expired" "remaining:0 Days"	13.04.0000.13
256350	Snapshot IDs are assigned disorderly, least seen when NAS shares created in standard pool exists.	13.04.0000.13
256333	In GUI, repair related details are missing in NAS Share Information page.	13.04.0000.13
256156 256425	Fail to delete standard NAS share	13.04.0000.13
256366	Fail to create Clone when CTRL doing failover process	13.04.0000.13
256326	In CLI, RepairProgress stays in -1% after repairing the NAS share created in standard pool for approximately 30 min	13.04.0000.13

Ref #	Description	Fixed Revision
256468	Fail to repair Standard NAS Share after reboot subsystem	13.04.0000.13
256469	In CLI, unable to view Repair related details in non-preferred Controller even after repairing the NAS share	13.04.0000.13
255521	Improve the description and not to show "Failed to start thick clone: Fail to map data key. (0x4100105)" for remote	13.04.0000.13
255889	For NAS share, no detailed description provided for repair modes 'normal' and 'forcezero', in CLI help (nasshare -h)	13.04.0000.13
256036	Pool is doing rebuilding process, but no display rebuilding status in Pool list	13.04.0000.13
256588	CTRL2's pool became "missed" status after CLI restart subsystem	13.04.0000.13
256009	After drive failure NAS Share was not accessible	13.04.0000.13
256693	Hit "Error (0x1102): Request has timed out" when execute "factorydefaults -a restore -t syslog"	13.04.0000.13
256725	Can't re-name file when ACL use Read-Write permission.	13.04.0000.13
255523	CTRL cannot boot success when restart partner CTRL for several times	13.04.0000.13

13.3. SR1.3.2 Errata & Known Issues

Ref #	Description	Workaround/Solution
256905	All Standard NAS share disappear after start IO (6 FC Volume, 6 iSCSI Volume, 2 Standard Share) around 20 minutes.	Avoid running stress IO on FC/iSCSI Volume and NAS in the same time.
	When create Standard NAS share during heavy IO to volume with same pool, the NAS share created but stay in "unmounted" status and Host cannot discover NAS share.	Workaround steps: - Stop all IO, then new created NAS share become "mounted" status - Disable and enable the NAS share smb protocol, then host side can discover/access the NAS share

14. SR1.3.1 Release Summary

VTrak D5000 firmware version 13.04.0000.11 introduces the NAS Share on Standard Pool. The Standard NAS Share provides all basic NAS functions, and good performance for media streaming application, especially when there are multiple ingest and playback streaming running in the same time.

14.1. SR1.3.1 New Feature

Ref #	Feature	Description
RD-8203	Standard NAS Share support	Support NAS Share on Standard Pool, which is more suitable for media streaming application. It provides all basic NAS functions, 1. SMB/NFS/FTP/HTTP 2. Local/Domain User/Group 3. ACL 4. Quota 5. Cloud backup.
RD-8205	Case-insensitive option for NAS Share	Fro case-insensitive OS like Windows and MacOS, list file operation in NAS Share may become slow when there are more files in a directory. Enable this option to optimize the performance with Windows and MacOS.
RD-7971	ACL Improvement	Improve the time when applying ACL recursively. Fix POSIX ACL problem for different users in the same group.

14.2. SR1.3.1 Bug Fixes

Ref #	Description	Fixed Revision
253732	Pool status might become "missed", when doing disk roaming from other subsystem, and do accept the incomplete Pool	13.04.0000.11
251692	During Battery charge, battery status gets stuck in Charging and does not go to FullyCharged status	13.04.0000.11
255159	BBU LED shows red, but the BBU is normal.	13.04.0000.11
255672	Failed to restore NAS Setting as default, an error message "Fail to reset setting." is shown on the screen	13.04.0000.11
255683	Failed to create Cloud Backup task on controller2 NAS Share.	13.04.0000.11
255720	Create a Cloud Backup task with new NAS Share, task may get stuck at idle.	13.04.0000.11
255775	Can't access NAS shares that owned on CTRL 2 after upgrading firmware from between SR1.3 and SR1.3.1. It also happens when restart subsystem.	13.04.0000.11
255820	Replace one controller might cause WORM function abnormal.	13.04.0000.11
255810	When NAS Share file path uses Simplified Chinese characters and space character, GUI/CLI cannot show the correct Pool/Volume/Share information when clearing extended attitude of Windows NT ACL. It also happens when switch between POSIX ACL and Windows (NT) ACL.	13.04.0000.11
254700	When old bug cause controller hang, press RSVD and boot up system may cause Memory Write Cache lost and pool degraded.	13.04.0000.11
256060	NDIU to SR1.3 failed. One controller (original master) updates to SR1.3 (13.04.0000.06), but the other controller keeps in old firmware version. To work around it, please hotplug the controller in SR1.3 firmware. Both controller firmware will be synced to old firmware. Then do NDIU to 13.04.0000.11.	13.04.0000.11

14.3. SR1.3.1 Errata & Known Issues

Ref #	Description	Workaround/Solution
255909	When Standard Pool status is “Critical” or "Degraded", NAS Share create is fail.	This is the same limitation as Standard Volume. Please replace the abnormal disk to resolve the “Critical” or “Degraded” state before creating new Standard Volume or NAS Share.

15. SR1.3 Release Summary

VTrak D5000 firmware version 13.04.0000.06 introduces the new features, including Thick Clone, Phone Home, Cloud Backup, WORM, Compression and De-dup. Some features need license to activate, and some features requires more memory support.
It also contains several bug-fixes for SR1.2. The detail information is listed below. For the additional compatibility list, please refer to the compatibility list on Promise web site.

Please note, the new feature will not work after downgrade from SR1.3 to lower revision.

15.1. SR1.3 New Features

Ref #	Feature	Description
RD-7968	Local/Remote Thick Clone	It’s under the control of Perfect Metro license. Thick Clone combines snapshot and replication to provide an expert of data backup and recovery. It can prevent data loss from accidental deletion, application crashes, data corruption, and viruses. Thick Clone works for both Volume and NAS Share.
RD-7969	Phone Home	The Phone home function is an automatic handle scheme for FRU failure detection and notification. When D5000 SW received critical events which belong to FRU or hardware component, SW will send notification email to customer and send an API call to Promise CRM to created CRM ticket automatically. When phone home case is created, CRM will send a notification email to customer (product registered email account). TS (technical support) team check case and then set up a backend process to advance replace a FRU spare and recover the original failed unit.
RD-7745	Cloud Backup	It’s under the control of Perfect Cloud license and works for NAS Share only. The feature supports file backup/restore with 7 cloud services, including Aliyun, Amazon S3, Azure Blob, Dropbox, Google Drive, OneDrive, and OpenStack Swift.
RD-7683	WORM	It’s under the control of Perfect Lock and works for NAS Share only. The feature avoids the modification for the existing data. Data in

Ref #	Feature	Description
		shared folders can only be written, and cannot be deleted or modified to ensure data integrity within the retention period.
RD-7967	Inline Compression	Compression works for both Volume and NAS Share
RD-7966	Inline De-dup	128G DRAM is required for De-dup support. De-dup works for both Volume and NAS Share. The de-dup-enabled blocks in the same Pool are checked.
RD-7970	New SMB Options	Support recycle-bin and SMB multi-channel options.
RD-7971	ACL Improvement	Improve the time when applying ACL recursively. Fix POSIX ACL problem for different users in the same group. * POSIX ACL has to be reconfigured after firmware update. The speed for this configuration will be much faster.

15.2. SR1.3 Bug fixes

Ref #	Description	Fixed Revision
254105	IO performance down and GUI slow(login took 2 minutes) around 20~30 minutes after refresh AD account/group	13.04.0000.06
254517	When there is command from non-optimized path, and backend IO busy aborted, it might cause controller crash.	13.04.0000.06
254067	In OpenStack cluster or VMware cluster environment, IO may hang randomly after running several weeks.	13.04.0000.06
254113	"Windows ACL" setting was changed from "Yes" to "No" after DIU upgraded firmware from SR1.1 to SR1.2.	13.04.0000.06
254259	In SR1.2 firmware, when NAS Share is created only on the slave controller, the master controller cannot run NAS protocol correctly, and GUI shows error in protocol page.	13.04.0000.06
252080	In SR1.2 firmware, host IO abort through iSCSI may not be able to abort the correct command.	13.04.0000.06
254960	Support CIDR format in NFS allow IP page	13.04.0000.06
254349	In SR1.2 firmware, new NAS Share may have default ACL configuration and cannot be deleted.	13.04.0000.06
254752	Use Emulex FC 16G HBA in point-to-point mode in Cent OS 7.0, reboot host may not able to discover the D5000 LUN automatically.	13.04.0000.06
254816	When unexpected power lost occurs, ACL for AD account might be incorrect.	13.04.0000.06
255115	NAS account may be cleared after doing NDIU	13.04.0000.06

15.3. SR1.3 Errata & Known Issues

Ref #	Description	Workaround/Solution
249102	When "CacheMirroring" is disabled, Pool(s) affinity to secondary controller goes to degraded after Power cycling the subsystem.	Always keep “CacheMirroring” enabled.

Ref #	Description	Workaround/Solution
255163	When Volume Block size is 4K, compression will not be triggered.	Please use 8K and larger block size for compression.
254938	If user enable Compression or De-dup for Thick-Provision Volume, then disable and downgrade to SR1.2, the “Used Capacity” might not be accurate.	Avoid enable and disable SR1.3 features, and then downgrade to SR1.2.

16. SR1.2 Release Summary

VTrak D5000 firmware version 13.03.0000.12 introduces many new features. It also contains several bug-fixes for SR1.1.3. The detail information is listed below. For the additional compatibility list, please refer to the compatibility list on Promise web site.

Please note, it is not allowed to downgrade from SR1.2 to lower revision.

16.1. SR1.2 New Features

Ref #	Feature	Description
RD-7428	Standard Pool/Volume	In SR1.2, we introduced the Standard Pool/Volume, which provides better performance but doesn't support any data service like thin-provision, snapshot. The Pool that supports data service and NAS share is now renamed as Advanced Pool. Here are the major characteristics for Standard Pool. 1. Better performance but no data service support, including thin-provision, snapshot, clone, replication, NAS share. 2. Except data service and NAS, other specifications are similar to Advanced Pool. Standard Volume and Advanced Volume shares the same RAID mode spec, lunmap setting, spare drive setting, bga behavior, dashboard information, performance monitor. 3. Detail differences for Standard Pool and Advanced Pool - For hybrid-RAID mode (R50, R60), if the HDDs are different capacity, the Standard Pool will use the smallest disk as base for all axles. While in Advance Pool, every axle can use different base of disk size. - Max Volume on a Standard Pool is 31. Max volume on an Advanced Pool is 32. - Cannot create Volume on a Standard Pool which is in "critical" and "degraded" state.
RD-7423	File Manager for NAS ACL	Provide NAS Share/Folder/File ACL Management on WebPAM. It supports configuring either Windows ACL or POSIX ACL.
RD-7915	Block VAAI	Both Standard and Advanced Volumes support VMWare VAAI through FC and iSCSI interface. VAAI features including HW Assisted Locking, Full Copy and Block Zero. UNMAP and Thin Provisioning Stun, are supported for Advanced Volume only.

Ref #	Feature	Description
RD-7699	NAS VAAI	Support NAS NFS Native SS for LC, Space Reserve, File Cloning and Extended Stats by using PRM-ESX-VTrakD5000NasPlugin.
RD-7422	Volume Replication	Support Online Replication and Migration for Advance Volume.
253330	Terminology Change	Change the terminology of management port IP address to avoid confusion. Floating IP --> Subsystem Management IP Static IP --> Controller Management IP
253163	Controller activity LED behavior change	The original Controller activity LED policy only references FC port status. The new policy will reference iSCSI port as well.

16.2. SR1.2 Bug fixes

Ref #	Description	Fixed Revision
251086	OPAS update firmware not working.	13.03.0000.12
251653	After configuring vlan, system will crash and cannot boot up successfully.	13.03.0000.12
250918	Advanced pool might be auto detached from Memory Write Cache, after restart ctrl1 when battery is reconditioned.	13.03.0000.12
251649	Battery recondition doesn't work in some cases.	13.03.0000.12
253129	Show the sector size when sector size is not 512 bytes.	13.03.0000.12
253062	Fix incorrect information in LUN Map online help.	13.03.0000.12
252677	Command 'swmgt -n email' show 'Password' not encrypted.	13.03.0000.12
252172	Firmware update by WebPAM may fail if there are controller failover and failback for many times.	13.03.0000.12
252713	When there are 127 or more snapshots, running IO and restart controller may take 20 minutes.	13.03.0000.12
251728	Change snapshot sorting by time, instead of name.	13.03.0000.12
253405	VTrak D5000 cannot detect drives in J5910/J5920 after using 110v power source.	13.03.0000.12
253127	CRM 20190414171358S: Controller 1 went offline. Creating large amount of directory on NAS share, and listed share frequently will cause memory leak and cause the controller to go offline.	13.03.0000.12
253182	In multiple VMware ESXi cluster environment, IO may hang after running for several months.	13.03.0000.12
253047	CRM 20190514090733S: When joining an AD domain, legal usernames with a '.' in them cannot be used to authenticate.	13.03.0000.12
251938	Unplugging Dedicated Spare Disk and then plug-in, the spare disk cannot be configured.	13.03.0000.12
253359	For phydrv -v command, WriteIoRequest is always 0.	13.03.0000.12
253545	"Time Zone" and "Pair" Settings failed while executing "Restore Factory Default" for all items.	13.03.0000.12
253260	Do stress test IO on SEAGATE ST10000NM0096, subsystem reports many	13.03.0000.12

Ref #	Description	Fixed Revision
	disk timeout events.	
253611	NAS local account synced to flash if abnormally shutdown.	13.03.0000.12
253751	Manual rebuild doesn't work for a Pool that was previously extended.	13.03.0000.12
253808	In a rare case, controller may crash if a dead drive is used to do a manual rebuild.	13.03.0000.12
253811	In 13.02.0000.27, "PhotoMesh Fuser" might have the issue "Failed to read file" when accessed via SMB.	13.03.0000.12
253796	Battery recondition will cause system to run in writethrough mode, and performance drop for some time.	13.03.0000.12
252421	Restart subsystem when battery is low or malfunction, event still show battery is normal.	13.03.0000.12
253816	Manually stopping the rebuild for a spare drive, and hotplugging the drive. It cannot be used for rebuild again.	13.03.0000.12
253997	Refresh user account in Web GUI will cause SMB IO stop. Client has to resume IO manually.	13.03.0000.12

16.3. SR1.2 Errata & Known Issues

Ref #	Description	Workaround/Solution
251389	If not using recommended MPIO/Multipath configuration, IO may be slow. And Promise PerfectPath will not support Windows Server 2016.	Please refer to the technical note for MPIO/Multipath configuration.
249771	It is not allowed to downgrade from SR1.2 to SR1.1 firmware.	N/A
250875	ACL setting cannot work when NAS Share is full.	Please delete files to release the Share space or extend the Share.
248561	NAS I/O might be very slow if there is SAN I/O (FC/iSCSI) running on the same pool.	Separating SAN I/O (FC/iSCSI) and NAS I/O (SMB) into different pools
250126	Use FC and iSCSI on the same host. Map all volume to FC initiator first, and then map some volume to iSCSI initiator. Windows might not able to see the volume mapped to iSCSI.	Do iSCSI logout and login, the volume can be discovered.
252813	Trunk port cannot be deleted when there is portal configure on it.	The design is to keep the Trunk port symmetric configured, so that the portal failover can work correctly. To reconfigure Trunk port, please remove all portals on it first.

17. SR1.1.3 Release Summary

VTrak D5000 firmware version 13.02.0000.27 contains several bug-fixes for SR1.1.2. No major feature changes for this version. For the additional compatibility list, please refer to the compatibility list on Promise web site.

17.1. SR1.1.3 Bug fixes

Ref #	Description	Fixed Revision
252861	Time zone settings show Los Angeles as UTC-9, LA is UTC-8	13.02.0000.27
252662	Change copyright date(s) to 2019	13.02.0000.27
252612	When running ACL setting for large amount of files, NAS performance will drop dramatically.	13.02.0000.27
252422	When doing NDIU from 13.02.0000.14 to 13.02.0000.18, transfer failed. The volumes which are owned by ctrl-1 are all stopped!	13.02.0000.27
252308	Host FC link goes down for a short time and then comes back up. In a rare condition, controller may hang and cannot failover successfully.	13.02.0000.27
251833	In a rare condition, dashboard performance monitor is not updated.	13.02.0000.27
251861	You cannot copy a filename that starts with a dot underscore (._filename.txt) to a D5000 NAS filesystem, you get a file not found error.	13.02.0000.27
251711	Trunk failover does not work.	13.02.0000.27

17.2. SR1.1.3 Errata & Known Issues

Ref #	Description	Workaround/Solution
248561	NAS I/O might be very slow if there is SAN I/O (FC/iSCSI) running on the same pool.	Separating SAN I/O (FC/iSCSI) and NAS I/O (SMB) into different pools
250126	Use FC and iSCSI on the same host. Map all volume to FC initiator first, and then map some volume to iSCSI initiator. Windows might not able to see the volume mapped to iSCSI.	Do iSCSI logout and login, the volume can be discovered.
251086	OPAS update firmware not work.	Please use Web GUI for firmware update. OPAS update firmware will be supported in later release.
252813	Trunk port cannot be deleted when there is portal configure on it.	The design is to keep the Trunk port symmetric configured, so that the portal failover can work correctly. To reconfigure Trunk port, please remove all portal on it first.

18. SR1.1.2 Release Summary

VTrak D5000 firmware version 13.02.0000.18 contains several bug-fixes for SR1.1.1. VTrak JBOD J5910/J5920 is introduced in this version for certain region of Promise channel. For the additional compatibility list, please refer to the compatibility list on Promise web site.

18.1. SR1.1.2 Bug fixes

Ref #	Description	Fixed Revision
251341	Hot plug controller2, some HDD models are falsely indicated as DEAD. Issue only found with ST2400MM0129 and AL14SEB120N. Update firmware to 13.02.0000.18 and the issue is resolved.	13.02.0000.18
251486	Stress test for over one week, one host IO may timeout, or one controller may unexpectedly restart.	13.02.0000.18
250923	Previously deleted dedicated Spare continues to appear after deletion, Spare remains even after deleting the Pool directly.	13.02.0000.18
250802	If 8 dedicated Spare Drives are created for a Pool, an unknown Spare Drive might be displayed.	13.02.0000.18
251096	ptiflash versioninfo 'Enclosure X Running Image Info' is blank at least for attached Promise JBODs.	13.02.0000.18
251071	If Web GUI is opened through a slave controller, service report cannot be downloaded.	13.02.0000.18
250921	Failed to create Raid5/6 pool with >32 physical drives, returns "Error (0x49846202): Invalid physical drive count in an axle"	13.02.0000.18
249473	Unable to create volume if capacity is not mentioned explicitly, it fails with the "Error (0x4100107): Fail to create Volume"	13.02.0000.18
248126	With NFS 4.1 connections, Data miscompare occurs during and after controller fail-over/back when running I/O via IO portals	13.02.0000.18
251438	IO failure may occur on failover, seems to happen because pool(s) remain in 'missing' state for too long.	13.02.0000.18
251533	Failed to create dedicated spare when Pool ID is >=20, it returns "Error (0x2013): Invalid setting parameters, specified pool not found"	13.02.0000.18

18.2. SR1.1.2 Errata & Known Issues

Ref #	Description	Workaround/Solution
248561	NAS I/O might be very slow if there is SAN I/O (FC/iSCSI) running on the same pool.	Separate SAN I/O (FC/iSCSI) and NAS I/O (SMB) into different pools.
250126	FC and iSCSI are used on the same host and all the volume to FC initiator first, then a volume is mapped to the iSCSI initiator. Windows might not recognize the volume	Logout iSCSI and log back in, the volume will be discovered.

Ref #	Description	Workaround/Solution
	mapped to iSCSI.	
251086	OPAS update firmware not working.	Please use Web GUI for firmware update. OPAS update firmware will be supported in a later release.

19. SR1.1.1 Release Summary

VTrak D5000 firmware version 13.02.0000.14 contains several bug-fixes for SR1.1. No major feature changes for this version. For the additional compatibility list, please refer to the compatibility list on Promise web site.

19.1. SR1.1.1 Bug fixes

Ref #	Description	Fixed Revision
250397	When using Windows Cluster in FC environment, LUN mapping might not work after host reboot, and volume then cannot be discovered by host. For users who do not use LUN mapping in Windows Cluster and FC environment, the issue can be ignored.	13.02.0000.14
250490	NAS user login works on Chrome, Safari, Opera; but does not work on Firefox, Edge and IE.	13.02.0000.14
250381	NAS Group Member can only display up to 20 NAS users.	13.02.0000.14
250149	Restoring NAS settings to factory default settings will delete ALL periodic snapshots (both volume, NAS share).	13.02.0000.14
250071	“showmount –e” command does not show NAS share clone and snapshot.	13.02.0000.14
250131	Periodic Snapshot continues to run even after the user disables it.	13.02.0000.14
250092	Controller might not restart successfully when using Web GUI to restart, then clicking "Log out" button.	13.02.0000.14
250075	Failure to delete folder using HTTP/HTTPS protocol.	13.02.0000.14
249720	Failure to modify NAS share when creating the NAS share using "max capacity" option.	13.02.0000.14
250055	Some LUN map operation procedure can result in an incorrect LUN map. See example procedure below: 1. Create two volumes. 2. Map volume 1 to 0. Scan LUN from host. 3. Modify lun mapping setting. Let volume 0 map to 0. Volume 1 map to none. 4. Scan from host.	13.02.0000.14
250093	Trunk deletion can fail after controller failover and failback. Example steps below: 1. Create Trunk0 on CTRL1. Trunk1 on CTRL2.	13.02.0000.14

Ref #	Description	Fixed Revision
	2. Create a portal on Trunk0. 3. Reboot CTRL1. 4. After CTRL1 failback, delete Trunk1. 5. Delete Trunk1 fails.	
249848	NAS user with read-only permission can write and delete filea in the NAS Share.	13.02.0000.14
249309	Modification on AD server doesn't sync to D5000 Web GUI.	13.02.0000.14
249735	Fail to delete NAS Share when an NFSv4 client is mounted.	13.02.0000.14
249835	Cannot change local user password when joining AD domain.	13.02.0000.14
249650	If there are multiple AD servers configured as trusted domain and some AD servers are not online, KDC value might be empty.	13.02.0000.14

19.2. SR1.1.1 Errata & Known Issues

Ref #	Description	Workaround/Solution
250348	When there are huge number of files & folders in the root path of a NAS share, The SMB protocol on Mac can mount 1PB NAS Share, but might auto unmount after 5 minutes.	Mac OS takes a long time to list the SMB root path. Users should either reduce the number of files and folders in the root path or modify Mac configuration as below. Use terminal command: "vim /etc/nsmb.conf" on Mac, and add lines listed below. Note that you must be logged in as an administrator with sudoer privileges to set this file. **[default]** **signing_required=no** **max_resp_timeout=180** **dir_cache_max_cnt=0** **protocol_vers_map=1**
247570	Multipath I/O (MPIO) application in Windows Server 2016	Windows Serve 2016 MPIO has good support for ALUA, we suggest customer to use native MPIO driver for Windows Server 2016. Please follow procedure below to manually add the "Promise Vtrak" model to Microsoft MPIO DSM 1. Search and execute MPIO tool via Server Manager 2. Follow steps in MPIO tool as below. MPIO → Under MPIO Devices → Click add button → Add the Model "Promise VTrak" 3. Reboot Client for the change to be effected.

20. SR1.1 Release Summary

VTrak D5000 firmware version 13.02.0000.05 is the first official release. It is designed for Windows, Mac and Linux environments.

1.1. SR1.1 Errata and known issues

Ref #	Description	Workaround/Solution

21. Contacting Technical Support

PROMISE Support Website at https://support.promise.com

PROMISE E-mail Support at support@promise.com

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