

Vess[®] R3000 Series

*R3000 SR1.5.1 Hot Fix Release
Notes*

FW 13.04.0000.43

This document is applicable to the following PROMISE Vess R3000 series models:

Model	Description
R3600iD	3U/16 w/ 4x1G iSCSI, Dual controller
R3600iS	3U/16 w/ 4x1G iSCSI, Single controller
R3600fiD	3U/16 w/ 4x1G iSCSI and 2x16G FC, Dual controller
R3600fiS	3U/16 w/ 4x1G iSCSI and 2x16G FC, Single controller
R3604fiD	3U/16 w/ 4x1G iSCSI and 4x16G FC, Dual controller
R3604fiS	3U/16 w/ 4x1G iSCSI and 4x16G FC, Single controller
R3600tiD	3U/16 w/ 4x1G and 2x10GBaseT iSCSI, Dual controller
R3600tiS	3U/16 w/ 4x1G and 2x10GbaseT iSCSI, Single controller
R3600xiD	3U/16 w/ 4x1G and 2x10G SFP+ iSCSI, Dual controller
R3600xiS	3U/16 w/ 4x1G and 2x10G SFP+ iSCSI, Single controller
R3800iD	4U/24 w/ 4x1G iSCSI, Dual controller
R3800iS	4U/24 w/ 4x1G iSCSI, Single controller
R3800fiD	4U/24 w/ 4x1G iSCSI and 2x16G FC, Dual controller
R3800fiS	4U/24 w/ 4x1G iSCSI and 2x16G FC, Single controller
R3804fiD	4U/24 w/ 4x1G iSCSI and 4x16G FC, Dual controller
R3804fiS	4U/24 w/ 4x1G iSCSI and 4x16G FC, Single controller
R3800tiD	4U/24 w/ 4x1G and 2x10GBaseT iSCSI, Dual controller
R3800tiS	4U/24 w/ 4x1G and 2x10GbaseT iSCSI, Single controller
R3800xiD	4U/24 w/ 4x1G and 2x10G SFP+ iSCSI, Dual controller
R3800xiS	4U/24 w/ 4x1G and 2x10G SFP+ iSCSI, Single controller

The supported Expansion subsystems include:

Vendor	Platform	Description
Promise	Vess J3600s	3U/16 JBOD, 12Gbs SAS to 12Gbs SAS (or 6Gbs SAS/SATA)
Promise	Vess J3800s	4U/24 JBOD, 12Gbs SAS to 12Gbs SAS (or 6Gbs SAS/SATA)
Promise	VTrak J5960s	4U/60 JBOD, 12Gbs SAS to 12Gbs SAS (or 6Gbs SAS/SATA)

1. Revision History

Build Date	Type	Release	Firmware Revision	Description
2019/08/14		FCS	13.03.0000.07	First Vess R3000 channel release
2020/01/13	Service Release	SR1.0	13.04.0000.12	<ol style="list-style-type: none"> Bug fix New features, including Local/Remote Thick Clone, Cloud Backup and WORM. Improvement for the existing features, like ACL and SMB options. Support Vess R3600fiD/R3600fiS, the 2 port FC model. <p>* The new features will not work after downgrade from SR1.0 to FCS.</p>
2020/04/27	Service Release	SR1.0.2	13.04.0000.18	<ol style="list-style-type: none"> Bug fix New features, including Standard NAS Share, R3800/J3800 4U/24 enclosure and Promise STSB (6Gbps SAS to SATA bridge board). <p>* The new features will not work after downgrade from SR1.0.2 to FCS.</p>
2020/05/28	Hot fix	SR1.0.3	13.04.0000.20	<ol style="list-style-type: none"> Bug fix <p>* The new features will not work after downgrade from SR1.0.3 to FCS.</p>
2020/10/16	Hot fix	SR1.0.4	13.04.0000.24	<ol style="list-style-type: none"> Bug fix <p>* The new features will not work after downgrade from SR1.0.4 to FCS.</p>
2021/01/22	Hot fix	SR1.0.5	13.04.0000.26	<ol style="list-style-type: none"> Bug fix <p>* The new features will not work after downgrade FW to FCS.</p>
2021/07/07	Service Release	SR1.0.6	13.04.0000.29	<ol style="list-style-type: none"> Function improvement and bug fixes <p>* The new features will not work after downgrade FW to FCS.</p>
2021/10/28	Hot fix	SR1.0.7	13.04.0000.32	<ol style="list-style-type: none"> Bug fix <p>* The new features will not work after downgrade FW to FCS.</p>
2022/06/01	Service Release	SR1.5	13.04.0000.41	<ol style="list-style-type: none"> Support VTrak J5960 4U60bay HD JBOD Function improvement and bug fixes <p>* The new features will not work after downgrade FW to FCS.</p>
2022/09/08	Hot fix	SR1.5.1	13.04.0000.43	<ol style="list-style-type: none"> Bug fix <p>* The new features will not work after downgrade FW to FCS.</p>

2. SR1.5.1 Hot Fix Release Summary

Vess R3000 firmware version 13.04.0000.43 included some bug fixes.

2.1. Fixed issues

No.	Ref #	Description	Workaround/Solution
1	RB-267081	<p>CRM 20220715080313S: Both controllers rebooting. some show watchdog resets</p> <p>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.</p>	<p>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.</p> <p>Fix this issue by:</p> <ol style="list-style-type: none"> 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	<p>Windows OS encountered errors while copy files which added extended attributes</p>	<p>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.</p> <p>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.</p>
3	RB-266621	<p>CTRL 2 [Kernel panic] while setup a iSCSI session via CTRL 2 owned IO Portal with iSNS CHAP.</p>	<p>Issue may occurred unexpectedly when setup and enable iSNS CHAP Authentication.</p> <p>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.</p>
4	RB-266970	<p>CPU/Memory monitor with SNMP OID</p> <p>Customer has request to inquiry CPU and memory usage via SNMP</p>	<p>Fix by add new SNMP table for CPU and memory usage info.</p> <ol style="list-style-type: none"> 1. Add DS controller performance support in MIB file 2. Add CPU/memory usage support in SNMP

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

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.

3. SR1.5 Release Summary

Vess R3000 firmware version 13.04.0000.41 included some bug fixes

3.1. 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 fix 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. Fix nginx security issue (CVE-2021-23017) for RB-265995
	Add Alias parameter for initiator setting to help identify FC/iSCSI initiator in LUN map operations	1. Add Alias option for GUI/CLI initiator settings. 2. Allow Alias parameter up to 47 characters long, containing alphanumeric characters, blank spaces and underscores.

Ref #	Feature	Description
	Improve login process and password protect to more secure and robust	<ol style="list-style-type: none"> 1. Have basic password security to prevent brute force attacks If wrong password is repeated 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

3.2. 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 is caused by FW replying with wrong data to host during processing of VAAI command. Apply FW fix by correct process flow for RECEIVE_COPY command, so that the correct data can returned to host.
2	RB-261637	CRM 20210623040858S: Can't nfs mount exported folder from Windows client.	The issue is caused by incorrect ACL mode that MW referenced 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 controller setting, multiple HDDs may report error and marked as offline.	This is command execution related handle to cause HDD report error. Apply FW fix by use 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 getting "too_many_requests" errors from Dropbox while uploading files.

No.	Ref #	Description	Workaround/Solution
			<p>Apply MW fix by adding error handling for "too_many_requests. Try to upload file again after waiting 60 seconds. If same error occurs, extend wait time for 120, 240, 300 seconds in sequence.</p>
6	RB-261536	CRM 20210616085544S: Controller 1 restarted for some reason and controllers did not rejoin the domain after failback.	<p>One issue is domain join related and can be improved by MW.</p> <p>Apply MW fix by (1). Open portal before join domain. (2). Add except handle for import setting.</p>
7	RB-265717	Volume#1 is un-exported status after controller failover	<p>The issue caused when MW has no export standard volume while doing failover process.</p> <p>Apply MW fix by check/export both standard and advanced volumes during handling failover</p>
8	RB-266391 RB-266602	The NAS NFS I/O not efficient and may get stuck during heavy I/Os.	<p>The NAS NFS I/O stuck issue caused by not enough free memory and inefficient memory management.</p> <p>Fix inefficient memory issue by adjusting kernel memory management parameter <code>min_free_kbytes</code> from 512MB to 1GB.</p>
9	RB-266469	Data sync Portal cannot be set after user selected network IO ports and configured ports as Trunk.	<p>The issue cause by wrong code logic during listing IO ports on Add Data Sync Portal GUI page.</p> <p>Fix by checking and listing remaining IO ports on Add Data Sync Portal GUI page.</p>
10	RB-257190	Windows ACL: change folder owner's ACL not working, always displays folder owner's ACL as "advanced"	<p>User cannot set ACL permission again when changed folder owner's ACL permission from RW to RO.</p> <p>This issue caused by MW appending all owner's ACLs into setting list after user changed the change folder owner's ACL</p> <p>Apply MW fix, do not append all owner's or owner group's ACLs into setting list.</p>
11	RB-260901	CRM 20210113130514S - Unable to access	The issue caused by allocated resources

No.	Ref #	Description	Workaround/Solution
		NAS share: Domain joined, but no domain user be discovered	<p>are not enough to process of large amount group/user list that returned by DC.</p> <p>In this case customer's group has more than 10000 members, which is beyond limit 10000 and large group/user value cause SQL command runs failed and winbind poll command got timeout.</p> <p>Fix issue by improve MW handle flows to process more than 10000 group members.</p>
12	RB-266588	CRM 20220511093236S: Unable to join domain	<p>User cannot join their Active Directory domain by GUI, get error message "Failed to Join Domain . Please check NetBIOS Name (Error 0X4100107)"</p> <p>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.</p> <p>Apply SW fix by checking max 16 characters length of NetBIOS name and can contain all of characters.</p>
13	RB-266612	No "iSNS" and "CHAP" related information in the Service Report.	<p>User cannot find "iSNS" and "CHAP" related info from Service Report.</p> <p>Apply SW fix to add 'iSCSI iSNS Info' and 'iSCSI Chap Info' into service report.</p>

4. SR1.0.7 Release Summary

Vess R3000 firmware version 13.04.0000.32 included some bug fixes

Please note, the new feature will not work after downgrade FW to FCS.

4.1. Fixed issues

No.	Ref #	Description	Workaround/Solution
1	RB-262225	VMware application may get stuck after	This risks only occur at SR1.0.6 in

No.	Ref #	Description	Workaround/Solution
	RB-265462	<p>completing R5 (or R50) pool rebuilding process.</p> <p>The issue caused by R5/R50 rebuild improvement in SR1.0.6 (FW version 13.04.0000.29), the improvement has risks when firmware process of host IO's LBA overlaps the rebuild progress, the IO or parity data may not write to the rebuilding disk.</p>	condition of rebuild R5 (or R50) advanced (or standard) pool and firmware process of Host I/O's LBA is overlap with rebuild LBA on the rebuild disk. Please upgrade FW to this SR 1.0.7 or new SR FW when SR1.0.6 FW running at R3000 subsystem.

5. SR1.0.6 Release Summary

Vess R3000 firmware version 13.04.0000.29 included some bug fixes

Please note, the new feature will not work after downgrade FW to FCS.

5.1. SR1.0.6 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	<p>Improve GUI handle flows while creating new Pool.</p> <p>a). Set Pool type default value to Standard Pool.</p> <p>b). When customers click button to create new Pool, GUI will pop up a notification window to guide customers to choose Advanced or Standard pool and then find out the best one for their application.</p>
	Support LSI35x28R	Modify Expander FW (version 01.00.0000.36) to identify and initiate new LSI35x28R Expander.

5.2. SR1.0.6 Bug fixes

Ref #	Description	Fixed Revision
260489	Fix SMB and WWW security related issues	13.04.0000.29
261152	Fix controller watchdog and reset after DMA busy occurred under the process of R50 sync and heavy NFS I/Os	13.04.0000.29
260945	Fix controller boot failure after completing thick clone and snapshots tasks.	13.04.0000.29
261007	CRM 20210222074137S: summary and display Pool, Volume, NAS share's Compression Ratio in CLI, GUI and service report	13.04.0000.29
261143	Add hidden option of -a nslookup to CLI domain command to provide nslookup information to debug join domain related issues.	13.04.0000.29
260883	Fix the problem of target Pool's not being selected while creating Thick Clone tasks	13.04.0000.29

Ref #	Description	Fixed Revision
261255	The df & du used capacity is not consistency under advance pool of nas-share	13.04.0000.29

6. SR1.0.5 Release Summary

Vess R3000 firmware version 13.04.0000.26 included some bug fixes

Please note, the new feature will not work after downgrade FW to FCS.

6.1. SR1.0.5 Bug fixes

Ref #	Description	Fixed Revision
260535	Fix Snapshot can't be displayed completely during scheduled Thick Clone tasks running.	13.04.0000.26
260465	Fix Scheduled(type as "Minute") Thick Clone tasks stop executing after deleted a Volume/NASshare.	13.04.0000.26
260209	Add new event for add/modify WORM operations	13.04.0000.26
254155	Improve user account security and management. (1. Add 'Password Strength' option to increase password complexity. 2. limit the number of user login failures)	13.04.0000.26
36480	Remove memory cache (the media type option is memory) and related operations.	13.04.0000.26
259482	Improve BE handle for CRM 20200916134016S: J5920 drives missing, most JBOD drives unconfigured.	13.04.0000.26
260519	Fix WORM Expire date become incorrect when modified WORM retention period setting	13.04.0000.26
260396 260656 260541 259163	Trigger Ctrl into maintenance mode when BE driver detected SAS IOP become fault.	13.04.0000.26

7. SR1.0.4 Release Summary

Vess R3000 firmware version 13.04.0000.24 included some bug fixes

Please note, the new feature will not work after downgrade from SR1.0.4 to FCS.

7.1. SR1.0.4 Bug fixes

Ref #	Description	Fixed Revision
258589	CRM 20200806114538S: unable to join AD domain, fails for login failure.	13.04.0000.24
258653	Failed to delete "Data Sync Portal" via GUI and CLI command.	13.04.0000.24
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.	13.04.0000.24
259445	CRM 20200915064024S: AD does not update and group permissions do not work.	13.04.0000.24
257702	CRM 20200504082654S: watchdog reset on controller 2	13.04.0000.24
257972	Upgrade the nginx version to 1.18.0 for web server security issue.	13.04.0000.24
33502	Support a minutes schedule type (option of 10 , 30 , 60 minutes) for D5000/R3000 Thick clone task.	13.04.0000.24
258397	The volume become read only in Linux Host after completed remote migration during I/Os	13.04.0000.24
259073	Pool operational status stayed in transferring after 5th FO/FB by 'shutdown -a restart -i 2'	13.04.0000.24
258832	Resume thick clone operation will failure when source pool become offline	13.04.0000.24
259075	Unexpected "Object of type 'Exception' is not JSON serializable " error while process of remote thick clone tasks	13.04.0000.24
252528 254616	Add new event for unexpected connection with JBOD (wrong SAS topology)	13.04.0000.24
35477	While AC Cable plug out - Buzzer not Sound, but WebPAM is showed as Error(RED) status.	13.04.0000.24
258858	NAS share at inoperable state after user offline PDs and then force online PD to cause volume become critical status	13.04.0000.24
259098 258607 258445 258722 258767	Improve thick clone related handles	13.04.0000.24
254430	Failed to delete "Data Sync Portal" via GUI and CLI command.	13.04.0000.24
258601 258768	Improve NAS share related handle for capacity/usage display issue and user quota management	13.04.0000.24
259168	Improve SMB related handle to prevent high memory usage and unexpected smbd panic during SMB I/Os.	13.04.0000.24

8. SR1.0.3 Release Summary

Vess R3000 firmware version 13.04.0000.20 included some bug fixes

Please note, the new feature will not work after downgrade from SR1.0.3 to FCS.

8.1. SR1.0.3 Bug fixes

Ref #	Description	Fixed Revision
257416	Can't create new NAS share due to GUI show "NAS share capacity exceeds the maximum." if selected small than 1GB capacity Pool at first and then selected another one.	13.04.0000.20
257932	NASShare operation will not send out SNMP trap immediately but follow the next SNMP trap.	13.04.0000.20
257817	Fix for AL-FTP tool compatibility issue.	13.04.0000.20
257309 253811	Too many FTP operations cause IO and GUI operations become slowly.	13.04.0000.20
253947	Controller boot failed (SAS3008 initial fail) after power cycle subsystem.	13.04.0000.20
257381	Improve enclosure error handle when detect unexpected fan speed.	13.04.0000.20
257586 257606	After turn off and on the PSU switch, the buzz still sounding and no event for PSU powered on.	13.04.0000.20
257935	CTRL1 cannot detect phydrv 9~16 after power cycle subsystem.	13.04.0000.20
257832	Unable to send out email notification but test email is fine	13.04.0000.20

9. SR1.0.2 Release Summary

Vess R3000 firmware version 13.04.0000.18 introduces the new features, including The NAS Share on Standard Pool, R3800/J3800 4U/24 enclosure and Promise STSB (6Gbps SAS to SATA bridge board). 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 at the same time. 4U24 enclosure provides better rack space utilization and more HDD number support with the same chassis number.

It also contains several bug-fixes for FCS and SR1.0. 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 SR1.0.2 to FCS.

9.1. SR1.0.2 New Features

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

Ref #	Feature	Description
		2. Local/Domain User/Group 3. ACL 4. Quota 5. Cloud backup.
RT-34449	Promise STSB	Promise STSB (6 Gbps SAS to SATA bridge board) support. It is to replace the Blackjack board, which is EOL.
RD-7683	R3800/J3800 4U/24 enclosure	Support 4U/24 enclosure.

9.2. SR1.0.2 Bug fixes

Ref #	Description	Fixed Revision
255805	Ctrl2 stayed in 'This controller was (held on) reset by the partner controller' after 'shutdown -a restart -i 2' during FOFB test	13.04.0000.18
256058	Pool might become "Unavail" after I/O running over 65 hours.	13.04.0000.18
255046	In FC loop topology with Windows client, IO might stop after restart both controllers in sequence.	13.04.0000.18
256198	Event logs not correct while "PDM" process triggered. It shows "Rebuild cannot be started on a smaller size PD".	13.04.0000.18
255962	System might fail to boot up after firmware update, if there is malfunction PD in the enclosure.	13.04.0000.18
256035	Instant rebuild is not started only when spare drives are plugged in.	13.04.0000.18
254822	If there are large amount of Standard Volume, slave controller may get stuck when booting	13.04.0000.18
256208	When use Standard Volume, data might temporally not synced when controller failover happen.	13.04.0000.18
256888	Running more background service which consumes more memory, like Remote Thick Clone tasks, may cause IO hang.	13.04.0000.18
256825	CTRL2 was (held on) reset by the partner controller after CLI restart subsystem	13.04.0000.18
255893 255863	When SSD Read Cache is configured, performance may drop dramatically and CPU usage keep 100% after restart CTRL1	13.04.0000.18
256200	Some scheduled Local/Remote Thick Clone tasks didn't running while timing up	13.04.0000.18
256229	I/O to the NAS Share (owned on CTRL 2) will stop running while restarting CTRL 1. (FOFB)	13.04.0000.18
256145	Cannot create NAS Share via GUI, after NDIU update FW from FCS to SR1.0. It works after refresh GUI.	13.04.0000.18
255415	Can't click Send Test Email button after save email configuration	13.04.0000.18
256260	The pool list can't be displayed, when create NAS Share with Setup Wizard,	13.04.0000.18
256471	Scheduled Remote Thick Clone tasks can't work after shutdown and then restart destination subsystem.	13.04.0000.18
255911	GUI modify email settings, username and password didn't save in subsystem after click "save" button	13.04.0000.18

Ref #	Description	Fixed Revision
256847	Only 10,000 items can be shown for the NAS Share "Folder".	13.04.0000.18
256517	GUI: Only 2 Ports can be selected for setting Trunk Ports in single controller environment (CLI command is ok.)	13.04.0000.18
256302	RBOD and JBOD expander "Warning threshold" of "PSU 1/2" not sync between Primary/Secondary after modified them.	13.04.0000.18
256346	There is "PSU fan or blower speed cannot be detected" event during controller failover/failback.	13.04.0000.18
256848	Event log show " Controller temperature is above the warning threshold" after restart controller	13.04.0000.18
256239	NAS user/group ACL information is incorrect, when the corresponding group ACL is configured.	13.04.0000.18
256329	ACL page cannot show NAS user account information while boot up, but renew the page can work.	13.04.0000.18
256339	GUI File Browser response is slow when there are over 10,000 files in the folder.	13.04.0000.18
256457	Clear ACL in GUI, the "Deleting" status showing in wrong row.	13.04.0000.18
256620	The tip appears garbled when invalid character is used in NAS folder name.	13.04.0000.18
257063	When repeat ACL configuration in a short time, sometimes ACL cannot be saved correctly.	13.04.0000.18
257062	After system boot up, GUI File Browser takes 15-20 minutes to show files when there are large amount of files in the folder.	13.04.0000.18
257103	When user and group id are the same, the group ACL setting is incorrect.	13.04.0000.18
257105	It takes long time to see the new folder created via File Browser.	13.04.0000.18
256997	Controller may crash when doing stress IO and BGA running	13.04.0000.18
256830	CRM 20200303050614S: Unable to NFS mount share on High Sierra, but able to mount on Windows 10 NFS	13.04.0000.18

9.3. SR1.0.2 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.

10. SR1.0 Release Summary

Vess R3000 firmware version 13.04.0000.12 introduces the new features, including Thick Clone, Cloud Backup and WORM. Some features need license to activate.

It also contains several bug-fixes for FCS. 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 SR1.0 to FCS.

10.1. SR1.0 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-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 shared folders can only be written, and cannot be deleted or modified to ensure data integrity within the retention period.
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.
RD-8253	2x 16G FC support	Support 2x 16G FC HBA

10.2. SR1.0 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	13.04.0000.12
254517	When there is command from non-optimized path, and backend IO busy aborted, it might cause controller crash.	13.04.0000.12
254067	In OpenStack cluster or VMware cluster environment, IO may hang randomly after running several weeks.	13.04.0000.12
254259	In FCS 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.	13.04.0000.12
254960	Support CIDR format in NFS allow IP page	13.04.0000.12
254349	In FCS firmware, new NAS Share may have default ACL configuration and cannot be deleted.	13.04.0000.12
254752	Use Emulex FC 16G HBA in point-to-point mode in Cent OS 7.0, reboot host may not able to discover the R3000 LUN automatically.	13.04.0000.12
254816	When unexpected power lost occurs, ACL for AD account might be incorrect.	13.04.0000.12

Ref #	Description	Fixed Revision
255115	NAS account may be cleared after doing NDIU	13.04.0000.12
251692	During Battery charge, battery status gets stuck in Charging and does not go to FullyCharged status	13.04.0000.12
255195	BBU LED shows red, but the BBU is normal.	13.04.0000.12
254242	Improve PSU warning message, also for single controller case.	13.04.0000.12
253706	WD HC DC330 be marked DEAD in long term IO test	13.04.0000.12
254037	Shutdown subsystem or one controller, then plug it out may cause another controller power on.	13.04.0000.12
253509	Power cycle might cause controller hang in C2F process, and cannot boot up automatically.	13.04.0000.12
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 switching between POSIX ACL and Windows (NT) ACL.	13.04.0000.12

10.3. SR1.0 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.
254229	Disk might be marked DEAD if JBOD cable plug-out and plug-in for short time.	Please avoid such operation.

11. FCS Release Summary

Vess R3000 firmware version 13.03.0000.07 is the first official release. It is designed for Windows, Mac and Linux environments. It provides FC/iSCSI block service. It also provides CIFS/NFS NAS service when equips with 32G DRAM on controller. Please note that License is required for PerfectData features, including Snapshot, Clone and SSD Cache.

11.1. FCS Errata and 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.
250875	ACL setting cannot work when NAS Share is full.	Please delete files to release the Share space or extend the Share.

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.
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.

12. Contacting Technical Support

PROMISE Support Website at <http://www.promise.com/support>

PROMISE E-mail Support at <http://support.promise.com/>

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