

# Vess<sup>®</sup> R3000 Series

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*R3000 SR1.0.7 Hot Fix Release  
Notes*

*FW 13.04.0000.32*

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)

## 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	<ul style="list-style-type: none"> <li>1. Bug fix</li> <li>2. New features, including Local/Remote Thick Clone, Cloud Backup and WORM.</li> <li>3. Improvement for the existing features, like ACL and SMB options.</li> <li>4. Support Vess R3600fiD/R3600fiS, the 2 port FC model.</li> </ul> <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	<ul style="list-style-type: none"> <li>1. Bug fix</li> <li>2. New features, including Standard NAS Share, R3800/J3800 4U/24 enclosure and Promise STSB (6Gbps SAS to SATA bridge board).</li> </ul> <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	<ul style="list-style-type: none"> <li>1. Bug fix</li> </ul> <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	<ul style="list-style-type: none"> <li>1. Bug fix</li> </ul> <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	<ul style="list-style-type: none"> <li>1. Bug fix</li> </ul> <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	<ul style="list-style-type: none"> <li>1. Function improvement and bug fixes</li> </ul> <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	<ul style="list-style-type: none"> <li>1. Bug fix</li> </ul> <p>* The new features will not work after downgrade FW to FCS.</p>

## 2. 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.**

### 2.1. 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 SR1.0.6 (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.	This risks only occur at SR1.0.6 in 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.

## 3. 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.**

### 3.1. 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	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 to guide customers to choose Advance or Standard pool and then find out the best one for their application.
	Support LSI35x28R	Modify Expander FW (version 01.00.0000.36) to identify and initiate new LSI35x28R Expander.

### 3.2. SR1.0.6 Bug fixes

Ref #	Description	Fixed Revision
260489	Fix SMB and WWW security related issues	13.04.0000.29

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

## 4. 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.

### 4.1. 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	Fixt 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

## 5. 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.**

### 5.1. 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

## 6. 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.**

### 6.1. 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

## 7. 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.**

## 7.1. 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 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.

## 7.2. 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	When SSD Read Cache is configured, performance may drop dramatically and CPU usage keep 100% after restart CTRL1	13.04.0000.18
255863		
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

Ref #	Description	Fixed Revision
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
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 raw.	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

### 7.3. 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.

## 8. 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.**

### 8.1. SR1.0 New Features

Ref #	Feature	Description
RD-7968	Local/Remote Thick Clone	<p>It's under the control of Perfect Metro license.</p> <p>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.</p> <p>Thick Clone works for both Volume and NAS Share.</p>
RD-7745	Cloud Backup	<p>It's under the control of Perfect Cloud license and works for NAS Share only.</p> <p>The feature supports file backup/restore with 7 cloud services, including Aliyun, Amazon S3, Azure Blob, Dropbox, Google Drive, OneDrive, and OpenStack Swift.</p>
RD-7683	WORM	<p>It's under the control of Perfect Lock and works for NAS Share only.</p> <p>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.</p>
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

### 8.2. 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

Ref #	Description	Fixed Revision
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
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 switch between POSIX ACL and Windows (NT) ACL.	13.04.0000.12

### 8.3. 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 plug-out and plug-in JBOD cable in the short time.	Please avoid such operation.

## 9. 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.

## 9.1. 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.
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.

## 10. 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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