PROMISE TECHNOLOGY, INC.

VTrak® Ex30 Series

Ex30 SR6.1 Release Notes

FW 10.16.2270.00

IMPORTANT NOTE: If you are currently using a Firmware Version of 4.09.xxxx.xx or before, you must first upgrade to VTrak EX30 Firmware SR4 version 4.10.0000.00 before flashing this Firmware.

R1.00– 09/23/2015

1. Release Summary

VTrak firmware version **10.16.2270.00** is designed for Windows, Mac and Linux environments.

Service Release 6.1 now includes support for connecting members of the Promise J5000 family of JBODs at 6Gbs. It also contains TRIM support for (1) SAS SSD's if they support SCSI UNMAP, and (2) SATA SSD's if they support TRIM RZAT (DZAT) and are connected with a Blackjack interposer (available from Promise).

This document is applicable to the following PROMISE VTrak Ex30 series models:

Model	Description
VTE830fD	4U/24 FC, dual controller
VTE830fS	4U/24 FC, single controller
VTE630fD	3U/16 FC, dual controller
VTE630fS	3U/16 FC, single controller

This Release continues its support for the EX30 to be used as a Node in a Promise A-Class Network File System High Availability Cluster with any of the following A-Class Enclosures and the G1100 NAS Gateway.

Model	Description
A3800fDM	4U/24 FC, dual controller
A3800fSL	4U/24 FC, single controller
A3600fDM	3U/16 FC, dual controller
G1100	NAS Gateway

The supported platforms for this release include:

Vendor	Platform	Type	Multipath
Microsoft	Windows Server 2008 SP2	x86/x64	PerfectPath 4.1.0.8
	Windows Server 2008 R2	x64	PerfectPath 4.1.0.8
	Windows Server 2012 R2	X64	PerfectPath 4.1.0.8
Apple	Mac OS X 10.9	X64	
	Mac OS X 10.10	X64	
RedHat	Enterprise Linux 6.3	x86/x64	PerfectPath 4.1.0.9
	Enterprise Linux 6.4	x86/x64	PerfectPath 4.1.0.9
	Enterprise Linux 6.6	X64	PerfectPath 4.1.0.9
SUSE	SLES 11 SP2	X64	PerfectPath 4.1.0.9
	SLES 11 SP3	X64	PerfectPath 4.1.0.9
VMware	ESX Server v6.0	x64	Embedded

The supported Expansion subsystems include:

Vendor	Platform	Description
Promise	VTrak J630s	3U/16-bay 6Gbs SAS to 6Gbs SAS/SATA
	VTrak J830s	4U/24-bay 6Gbs SAS to 6Gbs SAS/SATA
	VTrak J930s	4U/60-bay 6Gbs SAS to 6Gbs SAS

Vendor	Platform	Description
Promise	VTrak J5320s*	2U/24 JBOD 12Gbs SAS to 12Gbs SAS/6Gbs SATA, 2.5” Drive Bays
	VTrak J5300s*	2U/12 JBOD 12Gbs SAS to 12Gbs SAS/6Gbs SATA
	VTrak J5600s*	3U/16 JBOD 12Gbs SAS to 12Gbs SAS/6Gbs SATA
	VTrak J5800s*	4U/24 JBOD 12Gbs SAS to 12Gbs SAS/6Gbs SATA

*Connection to the EX30 is at 6Gbs

P**lease Note**: The 10.16.2270.00 firmware will update any attached VTrak J630's or J830's to Expander version 6.14.0000.05 which is the supported version for this firmware. (This doesn't apply to the J930 or the J5000 family). Jx30's that will be directly attached to a SAS HBA should not be upgraded. Please reference the Firmware Upgrade Procedure in the product manual available online at www.promise.com

2. What is New in SR 6.1 (fw version 10.16.2270.00)

This release update contains all of the features below, plus the changes listed in the Firmware and Software Specific Fixes

2.1. Added Support for the Promise J5000 family of JBODs

2.2. Added TRIM support for (1) SAS SSD's if they support SCSI UNMAP, and (2) SATA SSD's if they support TRIM RZAT (DZAT) and are connected with a Blackjack interposer.

2.3. Replaced SSL 2.0 and SSL 3.0 with TLS

3. Firmware Specific Fixes

Ref #	Fixed Bugs
219097	Fixed unusual issue seen in a configuration with an A-Class and an EX30 node and multiple Clients with multiple file systems under heavy I/O, a filesystem could become Read Only due to the Ex30 Storage Node Controllers being reset.
125944	A Controller crash could occur in rare instances following a Controller Failover and Failback and a "watchdog" event would be logged.
126333	Controller crash could occur while starting a Media Patrol and a "watchdog" event would be logged.
126342	PDSN information is used by support system for product warranty. For an attached Promise J930, the PDSN information was empty in enclosure verbose information
216694	Duplicate Logical Drives (LD's) or Array Offline could be seen after a power failure and after a revertible spare has become part of the array.
217836	Controller Fail would occur when trying to access more than 1024 LUNs.

218147	Bootloader version showed as 0.00.0000.00
218328	Physical Drives sometimes showed high error counts when a Promise Jx30 JBOD was hot added to the Eclass.
219047	A Controller crash was sometimes seen when running the I/O on an array with 96 Logical Drives
216247	The "Write Same" Command was not handling an LD Sector Size other than 512 Bytes .
216768	There was a Potential Memory Overflow in the LUN CLONE operation.
216890	Added retry in case memory allocation fails in processing Extended Copy commands
216886	Added LUNMAP entry for Transport Ready LUN or NOT PRESENT LUN to keep the controller from remaining in a paused state in those conditions.
216320	Fixed a connection problem sometimes seen with Brocade 6500 FC Switches
216532	With more than 100 drives in an Array in a 2 Controller system, some of the drives could get marked "Dead" during Bootup.

4. Software Specific Fixes

Ref #	Fixed Bugs
218511	Fixed issues setting Virtual IP address which resulted in "Invalid device id" error returned
125906 126150	Online help button fixes
125977	Fixed axles giving a wrong link position in Firefox browser for Logical Drives
217466	User would get logged out for the GUI and logged in again automatically if the user tried to "Create new Promise user with existing Promise user id" in the Product registration page
217813	The user was unable to see "Controller" information in "Monitoring Performance" help screen
217851	Fixed GUI Help message that says that Logical drives have "Cache" and "Dirty cache" options in the "Performance Monitor" screen, but the user was unable to see those options

216757	WebPam Pro-e GUI returned error "Invalid parameter" when setting NTP
218508	NTP Save fails if Time Zone is not GMT, GUI did not match the CLI

5. Known Product Limitations

Ref #	Description	Workaround/Solution
	OPAS is not started when two specific models of USB device are inserted, even though the subsystem detects the devices.	Try different brands of USB device. Refer to the compatibility list.
	During failover/failback of primary Ctr1, Windows Veritas Cluster node faults causing lost volume.	This is a limitation. It only works with Veritas DDI Q2 DSM5.1 for Windows.
	If you mistakenly completely reboot the RAID head before you boot an attached expansion chassis (JBOD), arrays may not come online. (5687367)	Always boot any attached JBOD's before booting the Ex30
219390	For SSDs: The mixing of SAS and SATA SSD drives in the same array is not supported	Don't configure Arrays with a mixture of SAS and SATA SSD's.
	Mixing Trim supporting SSDs and Non-TRIM supporting SSDs in the same array is not supported.	Don't configure Arrays with a mixture of SSD drives that support TRIM with drives that don't support Trim. A drive that does not support TRIM will be displayed as a regular HDD in the GUI.

6. Current Ex30 Limitations

Ref #	Note	Workaround/Solution
	General Ex30 Controller Information	
219806	If there is an SSD configured in the Ex30, flashing the SR5.0 build Firmware (10.13.2270.59) to the SR6.0 build Firmware (10.16.2270.00), the logical drive in the SSD goes to the Offline state in Windows Disk management.	Go into Disk Administrator and force the drive back online

Ref #	Note	Workaround/Solution
219374	If there are SATA drives in the Ex30, as per firmware design, the Blackjack firmware that is the interface to SATA drives will be only updated on the master controller. In NDIU case going from SR5.0 build Firmware (10.13.2270.59) to the SR6.0 build Firmware (10.16.2270.00), when the first controller updates to the new Firmware, it comes up as slave. So Blackjack firmware is not updated. And when the second controller is updated, the first controller becomes master by the failover process. So PD discovery doesn't happen and the Blackjack firmware doesn't get updated. As a work around, system need to be rebooted for Blackjack firmware update.	When using the NDIU option with SATA drives in the Ex30 enclosure, reboot the Ex30 when going from SR5.0 build Firmware (10.13.2270.59) to the SR6.0 build Firmware (10.16.2270.00).
126187	If the configuration has VAAI enabled and LUN Affinity is enabled and there is a background synch running on a RAID 5 or RAID 6, it is possible for there to be some data corruption during an Extended Copy command. It is suggested that users disable LUN Affinity if they have VAAI enabled.	Disable LUN affinity if VAAI is enabled. This is usually only enabled when VMWare 5.x support is required.
126237	Inconsistent blocks can occur if the controller reboots during a Quick initialization on a RAID 1E.	Run full initialization on a RAID 1E.
126262	If an Ex30 subsystem is rebooted during a Rebuild, on a rare occasion it was seen that one of the controllers was hung after booting up. The user can either remove and replace the controller or, optionally, reboot the chassis.	Either remove and replace the controller or, optionally, reboot the chassis.
126269	When migrating from a RAID 10 to a RAID 1e, if a controller failover occurs, the booting controller could get hung during the boot. The user can either remove and replace the controller or, optionally, reboot the chassis.	Either remove and replace the controller or, optionally, reboot the chassis.
126246	If an array is created with the maximum number of LD's (32) on a RAID 1e, sometimes a subsystem lock can occur.	Retrying the command to create the LD's should succeed.
219693	Enabling “coercion” in the GUI can result in the Controllers SSD TRIM Support is getting enabled	The user should not enable “coercion” when using SSD’s

Ref #	Note	Workaround/Solution
219627	When flashing an Ex30 that has mixed JBODs attached that include both to J5000s and J930s, sometimes Controller 2 goes into maintenance mode	Either disconnect the J930 JBOD before flashing, or if the controller goes into Maintenance mode, rebooting the Controller in Maintenance mode should resolve the problem.
220105	After removing a Spare drive and reinserting it, or inserting a new drive in any slot, the drive may not be seen or be marked as “not useable”. Rebooting the Controller fixes this.	Users who wish to remove a spare should delete the spare and then remove it. If a newly inserted drive is not useable because this procedure wasn’t followed, then rebooting the controller may fix this issue.
216432	Deleting multiple "Logical Drives" can sometimes cause a Mac host to reboot when connected through a Promise SANLink2.	Avoid deleting multiple LD’s at the same time with this configuration if it is imperative that the host not reboot.
	Software Issues	
219116	When and EX30 has a mixture of both J5000 and Jx30 JBODS, removing a cable could result in the last JBOD not being displayed in the GUI.	Reinserting the missing cable and restarting the controller that has gone into maintenance mode solves the problem.
218975	If the PSU1 is removed from a J5600 (3U16), the GUI Operational Status is "Powered On and Functional" when it should be "N/A".	Ignore the incorrect status in the GUI.

7. Contacting Technical Support

PROMISE Support Website at http://www.promise.com/support/support_eng.asp

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

PROMISE Disclaimer

Notice:

Although PROMISE Technology, Inc. has attempted to ensure the accuracy of the content of this document; it is possible that this document may contain technical inaccuracies, typographical, or other errors. PROMISE Technology assumes no liability for any errors in this publication, and for damages, whether direct, indirect, incidental, and consequential or otherwise, that may result from such error, including, but not limited to loss of data or profits.

PROMISE Technology provides this publication “as is” without warranty of any kind, either express or implied,

including, but not limited to implied warranties of merchantability or fitness for a particular purpose. The published information in the manual is subject to change without notice. Promise Technology reserves the right to make changes in the product design, layout, and driver revisions without notification to its users. This version of this document supersedes all previous versions.