



VTrak Ex30 SR4 Compatibility List

Updated 11/20/2013

Supports Service Release 4.0

Date of Service Release: 05/31/2013

VTrak Systems Covered:

- **Vtrak E630f** – 3U/16-bay 8Gb Fibre to 6Gbs SAS/SATA RAID System
- **Vtrak E830f** – 4U/24-bay 8Gbs SAS to 6Gbs SAS/SATA RAID System
- **Vtrak J630s** – 3U/16-bay 3Gbs SAS to 6Gbs SAS/SATA Expansion JBOD System
- **Vtrak J830s** – 4U/24-bay 6Gbs SAS to 6Gbs SAS/SATA Expansion JBOD System
- **Vtrak J930s** – 4U/60-bay 6Gbs SAS to 6Gbs SAS Expansion JBOD System

System Versions Covered:

- **Vtrak Ex30 BootLoader** – Version 0.19.0000.30 [Jan 10, 2013]
- **Vtrak Ex30 Firmware** – Version 4.10.0000.00 [May 23, 2013]
– Version 10.13.2270.00 [May 23, 2013]
- **Vtrak Ex30 Software** – Version 4.10.0000.00 [May 23, 2013]
– Version 10.13.2270.00 [May 23, 2013]
- **6Gbs Vtrak Jx30s Firmware** – Version 6.13.0000.08 [Apr 06, 2012]
- **6Gbs J930 Firmware** – Version 5.06.0000.09 [June 01, 2012]
- **Windows PerfectPath MPIO DSM** – Version 4.01.0000.02

Document History

Date	Editor	Revision	Deviation
06/06/2013	R Thomas	0.1	1. Initial list for Vtrak Ex30 SR4 Compatibility
06/11/2013	R Brose	1.00	2. Updated formatting and finalized. Added Windows 2012 PerfectPath disclaimer
6/14/2013	R Brose	1.01	3. Added Hitachi SATA FW
6/28/2013	R Brose	1.02	4. Added A/V qual information
9/12/2013	R Hutchens	1.03	5. Added Seagate ES.3 info
11/20/2013	R Hutchens	1.04	6. Added several new drives and SSDs

DEVICE COMPATIBILITY NOTE:

Basic compatibility between the 3rd party device and Promise device has been verified in typical configurations, unless otherwise stated.

DISCLAIMERS:

Only the versions available at time of testing have been verified, as listed. Corner cases may exist depending on user configuration etc. Individual 3rd party units may exhibit problems that did not show up in through the Promise test process. Published performance is not assured with configuration deviations.

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Operating Systems

Supported Operating Environments			
Vendor	Core Platform	Type	Notes
Microsoft	Windows Server 2008 w/SP2	x86/x64	ALUA support with PerfectPath v4.01.02 or later.
	Windows Server 2008 R2 SP1	x64	ALUA support with PerfectPath v4.01.02 or later.
	Windows Server 2012	x64	ALUA support with PerfectPath v4.01.02 or later.
RedHat	Enterprise Linux 6.2	x86/x64	LUN Affinity/ALUA natively supported.
	Enterprise Linux 6.3	x86/x64	LUN Affinity/ALUA natively supported.
SuSE	Linux Enterprise Server 11.2	x86/x64	LUN Affinity/ALUA natively supported.
VMware	ESX Server v5.1	x64	LUN Affinity/ALUA natively supported
	ESX Server v5.1 update 1	x64	LUN Affinity/ALUA natively supported

Note: VMware has been qualified by Promise and then certified by VMware.

Windows Server 2012 Certification requires PerfectPath 4.1.0.3 which is currently under test.

Fibre Channel Switches and SFPs

Fibre Channel Switches			
Vendor	Model	Ports	Firmware
Brocade	SilkWorm 200E	16x4Gb	v5.1.0
	Brocade 300**	24x8Gb	V7.0.2a
	Brocade 5100	40x8Gb	V7.0.2a
	Brocade 8000	24x10Gb FCoE/iSCSI 8x8Gb FC	V7.0.2a
Cisco	MDS 9020	20x4Gb	v2.1
	MDS 9124*	24x8Gb	v5.2
	MDS 9148	48x8Gb	v5.2
	NEXUS 5010	20x10Gb FCoE/iSCSI 6x8Gb FC	v4.1(3)N2(1)
IBM	TotalStorage SAN16B-2	16x4Gb	v6.2.2c
Qlogic	SANbox 5600Q	16x4Gb	v7.4.0.22.0
	SANbox 9000 - 4Gb blade	32-128x4Gb	v7.8.0.15.00
	SANbox 9000 - 8Gb blade	32-128x8Gb	v7.8.0.15.00
	SANbox 1400	10x4Gb	v5.0.1.10
	SANbox 5802V	20x8Gb	v8.0.13.08.00

*Model MDS 9124 was not tested, but compatibility is derived from MDS 9148 testing with v5.2

** Leave the Brocade 300 speed set to "Auto" when the topology is set to "L- Port". Set the Target side speed to match either 4G or 8G if the topology is set to "NL-Port".

SFP Interoperability Matrix (Shortwave)		
Vendor	Model	Description
Apple	4Gb SFP to SFP	2.9M 4Gb SFP Copper Cable (Qlogic 4Gb and 8Gb only)
Avago	AFBR-57D7APZ	Digital Diagnostic SFP, 850 nm, 8.5/4.25/2.125 GBd Low Voltage (3.3 V) - 85°C
Brocade	57-1000012-01	Brocade 8Gb Shortwave SFP
Cisco	DS-SFP-FC8G-SW	Cisco 8Gb Shortwave SFP
Finisar	FTLF8528P2BCV	Digital Diagnostic SFP, 850 nm, 8.5/4.25/2.125 GBd Low Voltage (3.3 V) - 70°C
Finisar	FTLF8528P2BNV	Digital Diagnostic SFP, 850 nm, 8.5/4.25/2.125 GBd Low Voltage (3.3 V) - 85°C
Finisar	FTLF8524P2BNL	Digital Diagnostic SFP, 850 nm, 4.25/2.125 GBd Low Voltage (3.3 V) - 70°C
Finisar	FTLF8524P2BNV	Digital Diagnostic SFP, 850 nm, 4.25/2.125 GBd Low Voltage (3.3 V) - 85°C

Fibre Channel Host Bus Adapters

Fibre Channel HBAs							
Vendor	Model	BIOS	Firmware	Fcode	Windows	Linux	VMware Tested
Brocade	FC425	v3.2.1.0	v3.2.1.0		v3.2.1.0	v3.2.1.0	Supported
	FC825	v3.2.1.0	v3.2.1.0		v3.2.1.0	v3.2.1.0	Certified
Emulex*	LightPulse LPe12000	2.12a11	2.01a11	3.10a6	2.74.014	8.3.7.11	Supported
	LightPulse LPe12002	2.12a11	2.01a11	3.10a6	2.74.014	8.3.7.11	Certified
	LightPulse LPe12004	2.12a11	2.01a11	3.10a6	2.74.014	8.3.7.11	Supported
	LightPulse LPe1250	2.12a11	2.01a11	3.10a6	2.74.014	8.3.7.11	Supported
	LightPulse LPe11000	2.12a11	2.01a11	3.10a6	2.74.014	8.3.7.11	Supported
	LightPulse LPe11002	2.12a11	2.01a11	3.10a6	2.74.014	8.3.7.11	Certified
	LightPulse LPe11004	2.12a11	2.01a11	3.10a6	2.74.014	8.3.7.11	Supported
	LightPulse LPe1150	2.12a11	2.01a11	3.10a6	2.74.014	8.3.7.11	Supported
Qlogic*	SANblade QLE2560	3.20	5.07.02	3.19	9.1.10.28	8.04.00.15	Supported
	SANblade QLE2562	3.20	5.07.02	3.19	9.1.10.28	8.04.00.15	Supported
	SANblade QLE2564	3.20	5.07.02	3.19	9.1.10.28	8.04.00.15	Certified
	SANblade QLE2460	3.20	5.07.02	3.19	9.1.10.28	8.04.00.15	Supported
	SANblade QLE2462	3.20	5.07.02	3.19	9.1.10.28	8.04.00.15	Supported
	SANblade QLE2464	3.20	5.07.02	3.19	9.1.10.28	8.04.00.15	Certified
LSI*	LSI7204EP	2.02.06	1.03.27	1.00.49	1.27.01	4.00.43	Supported
	LSI7404EP	2.02.06	1.03.27	1.00.49	1.27.01	4.00.43	Supported
ATTO	Celerity FC84EN	3.25	3.25		1.60	1.50	Supported
	Celerity FC82EN	3.25	3.25		1.60	1.50	Supported
	Celerity FC42ES	3.25	3.25		1.60	1.50	Supported

† 'VMware Tested' column indicates the level of support for VMware ESX 5.1 Update 1. 'Certified' indicates the controller was fully qualified by Promise and was used in the VMware certification test process using vSphere test suite. 'Supported' implies the controller should work at the same level as the certified model as it is based on the same driver level and some spot testing has been performed.

Hard Disk Drives

SAS Drives

VTrak Ex30 and Jx30 Drive Compatibility List							
Vendor	Family	Model	Part Number	Firmware	Capacity	RPM	Interface
Hitachi	Ultrastar 7K4000 (AV Qualified)	HUS724040ALS640		A124	4000GB	7,200	6Gb/s SAS
		HUS724030ALS640		A124	3000GB	7,200	6Gb/s SAS
		HUS724020ALS640		A124	2000GB	7,200	6Gb/s SAS
	Ultrastar 7K3000	HUS723030ALS640	0B26311	A100, A222,A352	3000GB	7,200	6Gb/s SAS
		HUS723020ALS640	0B26312	A100, A222,A352	2000GB	7,200	6Gb/s SAS
	Ultrastar 15K600	HUS156030VLS600	0B23661	A5D0	300GB	15,000	6Gb/s SAS
		HUS156045VLS600	0B23662	A5D0	450GB	15,000	6Gb/s SAS
		HUS156060VLS600	0B23663	A5D0	600	15,000	6Gb/s SAS
Seagate	Constellation ES.3	ST4000NM0023	92M270-003	003	4000GB	7,200	6Gb/s SAS
		ST3000NM0023		003	3000GB	7,200	6Gb/s SAS
		ST2000NM0023		003	2000GB	7,200	6Gb/s SAS
		ST1000NM0023		003	1000GB	7,200	6Gb/s SAS
	Constellation ES.2	ST33000650SS	9SM260-002	3	3000GB	7,200	6Gb/s SAS
		ST32000645SS	9SM260-002	4	2000GB	7,200	6Gb/s SAS
	Constellation ES	ST500NM0001	9Y2262-001	2	500GB	7,200	6Gb/s SAS
		ST1000NM0001	9Y2264001	2	1000GB	7,200	6Gb/s SAS
		ST2000NM0001	9Y2268-001	2	2000GB	7,200	6Gb/s SAS
		ST32000444SS	9JX248-003	6	2000GB	7,200	6Gb/s SAS
		ST31000424SS	9JX244-003	6	1000GB	7,200	6Gb/s SAS
		ST3500414SS	9JX242-003	6	500GB	7,200	6Gb/s SAS
	Cheetah 15K.7	ST3600057SS	9FS066-008	8	600GB	15,000	6Gb/s SAS
		ST3450857SS	9FR066-008	8	450GB	15,000	6Gb/s SAS
Western Digital	WD RE SAS (AV Qualified)	WD4001FYYG	WD4001FYYG-01SL3W0	VR07	4000GB	7,200	6Gb/s SAS
		WD3001FYYG	WD3001FYYG-01SL3W0	VR07	3000GB	7,200	6Gb/s SAS
		WD3001FYYG	WD2001FYYG-01SL3W0	VR07	2000GB	7,200	6Gb/s SAS
		WD3001FYYG	WD1001FYYG-01SL3W0	VR07	1000GB	7,200	6Gb/s SAS
	XE	WD9001BKHG	WD9001BKHG-02D22V1	SR03,SR04	1000GB	7,200	6Gb/s SAS
Toshiba		MK1001TRKB	HDD3A02CZK51	105	1000GB	7,200	6Gb/s SAS
		MK2001TRKB	MK2001TRKB	105	2000GB	7,200	6Gb/s SAS
	Harrier (AV Qualified)	MG03SCA400	MG03SCA400	108	4000GB	7,200	6Gb/s SAS
		MG03SCA300	MG03SCA300	108	3000GB	7,200	6Gb/s SAS
		MG03SCA200	MG03SCA200	108	2000GB	7,200	6Gb/s SAS
		MG03SCA100	MG03SCA100	108	1000GB	7,200	6Gb/s SAS

"AV Qualified" Drives have gone through additional testing to assure consistent performance under Audio Video load conditions.

SATA Drives*

VTrak Ex30 and Jx30 Drive Compatibility List							
Vendor	Family	Model	Part Number	Firmware	Capacity	RPM	Interface
Hitachi	Ultrastar 7K4000	HUS724040ALE640	0F14683	A390,A580	4000GB	7,200	SATA-600
		HUS724030ALE640		A390,A580	4000GB	7,200	SATA-600
		HUS724020ALE640		A390,A580	4000GB	7,200	SATA-600
	Ultrastar 7K3000	HUA723020ALA640	0F12455	5C0	2000GB	7,200	6Gb/s SATA
		HUA723030ALA640	0F12456	5C0	3000GB	7,200	6Gb/s SATA
	Ultrastar A7K2000	HUA722020ALA330	0F10452	3EA	2000GB	7,200	3Gb/s SATA
		HUA722010CLA330	0A39289	3EA	1000GB	7,200	3Gb/s SATA
		HUA722050CLA330	0F11000	3EA	500GB	7,200	3Gb/s SATA
	Megascale	HMS5C4040ALE640	0F19847	A580	4000GB	5,700	6Gb/s SATA
Western Digital	RAID Edition 4	WD2003FYYS	WD2003FYYS-02W0B0	1D01	2000GB	7,200	3Gb/s SATA
		WD1503FYYS	WD1503FYYS-02W0B0	1D01	1500GB	7,200	3Gb/s SATA
	WD RE SATA	WD4000FYYZ	WD4000FYYZ-01UL1B1	1K02	4000GB	7,200	6Gb/s SATA
		WD3000FYYZ	WD3000FYYZ-01UL1B1	1K02	3000GB	7,200	6Gb/s SATA
		WD2000FYYZ	WD2000FYYZ-01UL1B1	1K02	2000GB	7,200	6Gb/s SATA
Toshiba		MK1002TSKB	HDD3B04CZK51	MT2A	1000GB	7,200	6Gb/s SATA
		MK2002TSKB	MK2002TSKB	MT2A	2000GB	7,200	6Gb/s SATA
Seagate	Terascale	ST4000NC000		CE02	4000GB	5,900	6GB/s SATA
		ST3000NC000		CE02	3000GB	5,900	6GB/s SATA
		ST2000NC000		CE02	2000GB	5,900	6GB/s SATA
		ST1000NC000		CE02	1000GB	5,900	6GB/s SATA

*Not supported on J930s

“AV Qualified” Drives have gone through additional testing to assure consistent performance under Audio Video load conditions.

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SSD Drives*

VTrak Ex30 and Jx30 Drive Compatibility List							
Vendor	Family	Model	Part Number	Firmware	Capacity	Type	Interface
Intel	DC S3700	SSDSC2BA800G3	SSDSC2BA800G3	265	800GB	MLC	6Gb/s SATA
		SSDSC2BA400G3	SSDSC2BA400G3	265	400GB	MLC	6Gb/s SATA
		SSDSC2BA200G3	SSDSC2BA200G3	265	200GB	MLC	6Gb/s SATA
		SSDSC2BA100G3	SSDSC2BA100G3	265	100GB	MLC	6Gb/s SATA
	710 SSD Series	SSDSA2BZ100G301	SSDSA2BZ100G301	362	100GB	MLC	3Gb/s SATA
		SSDSA2BZ200G301	SSDSA2BZ200G301	362	200GB	MLC	3Gb/s SATA
	320 SSD Series	SSDSA2CW600G3**	SSDSA2CW300G3B5**	362	600GB	MLC	3Gb/s SATA
		SSDSA2CW300G3	SSDSA2CW300G3B5	362	300GB	MLC	3Gb/s SATA
		SSDSA2CW160G3**	SSDSA2CW160G3K5**	362	160GB	MLC	3Gb/s SATA
		SSDSA2CW120G3**	SSDSA2CW120G310**	362	120GB	MLC	3Gb/s SATA
		SSDSA2CW080G3**	SSDSA2CW080G310**	362	80GB	MLC	3Gb/s SATA
	X25-E	SSDSA2SH064G101	SSDSA2SH064G101	8860	64GB	SLC	3Gb/s SATA
		SSDSA2SH032G101	SSDSA2SH032G101	8860	32GB	SLC	3Gb/s SATA
STEC	Mach16 SSD	M16ISD2-200UCU	M16ISD2-200UCU	184	200GB	SLC	3Gb/s SATA

* Not supported on J930s

** These SSD drives require an updated VTrak firmware available from Promise Support. The 300 GB Intel 320 SSD does NOT require this update. Please contact technical support @ 408-228-1400 or via web <https://support.promise.com>
Reference this compatibility list.

Hard Disk Drive APM Support Level with MAID 2.0

Supported Disk Drives with Advanced Power Management						
Vendor	Family	Firmware	Interface	VTrak MAID Support		
				Park Heads Level-1	Reduce RPM Level-2	Spin-down Level-3
Hitachi	Ultrastar A7K2000	3EA	3Gb/s SATA	YES	YES	YES
	Ultrastar A7K3000	5C0	6Gb/s SATA	YES	YES	YES
Intel	X25-E	8850	3Gb/s SATA	n/a	n/a	n/a
Seagate	Cheetah 15K.7	0008	6Gb/s SAS	YES	NO	YES
	Constellation ES	0006	6Gb/s SAS	YES	YES	YES
	Constellation ES 2	0003	6Gb/s SAS	YES	YES	YES
Western Digital	RAID Edition 4	1D01	3Gb/s SATA	YES	NO	YES

 ‡ Promise qualified drives will be the only supported drives for the VTrak systems. The support requirements will be derived from the drive part numbers listed above and not necessarily by the model number. Using unqualified disk drives with the system may appear to work but cannot be guaranteed for the service life.

UPS Appliances

UPS Support*	HW Rev.	APC OS	APP. Module SW
§ APC Smart-UPS 1500VA - North America	667.18.D	v3.6.1	v3.5.8
§ APC Smart-UPS 2200VA - North America	667.18.D	v3.6.1	v3.5.8
§ APC Smart-UPS 3000VA - North America	667.18.D	v3.6.1	v3.5.8

*The above UPS models were fully validated for use with a properly configured VTrak Ex30 system. For other regions that use different power sources, such as Japan, using the APC Smart-UPS equivalent will be supported.

USB Flash Drives (OPAS Service Port)

Vendor**	Family	MFG Part Number	Capacity
HP	v125w	P-FD4GBHP125-EF	4GB
Pretec	i-Disk	Q3U04G	4GB

** There is a large variety of USB Flash Drive vendors to select from on the market. The Promise qualification team selected only a handful to represent only a sampling of available Flash Drives. The above list shows the drives that have passed a rigorous read/write/discovery test process are deemed worthy of use out-of-the-box. There were other USB Flash drives that did not function properly out-of-the-box, and required a partition and format in order to use them.

Promise Validated Applications

Validated Applications			
Vendor	Product	Version	Description
Microsoft	Microsoft Cluster Service	2008 Server R2	Fail-over Cluster Service
RedHat	Global Filesystem	GFS2	Clustered Filesystem
	RH Cluster	RHEL 6.1 and 6.2	Fail-over Cluster Service

Promise Validated Browsers for WebPAMPROe

Validated Web Browsers for Ex30 WebPAM PROe	
Product	Version
Internet Explorer	8.0.7601.17514 , 9.0.8112.16421
Safari for Mac	5.1
Safari for Windows	5.1
Mozilla Firefox for Windows	21.0
Mozilla Firefox for RHEL	21.0
Mozilla Firefox for SLES 11.1	21.0

♠ End of Report ♠