VTrak x30

PROMISE® TECHNOLOGY, INC.

VTrak E-Class & J-Class
RAID Storage Subsystem & JBOD Expansion Unit for Big Data

Benefits

▶ **FAST**
Optimized for high performance, high bandwidth big data applications requiring large block sequential IOPs.

▶ **SIMPLE**
Modular RAID storage subsystem with hot-swappable components.

▶ **SCALABLE**
RAID storage subsystem that scales with 9 additional expansion units.

▶ **RELIABLE**
VTrak x30 Series is the only Apple-qualified enterprise SAN subsystem, with high-availability dual controllers, hot-swappable modular design, and included 3-Year onsite parts replacement warranty.

▶ **COST-EFFICIENT**
"Pay as you grow" with 85-90% rack space and energy savings compared to non-integrated multi-vendor solutions.
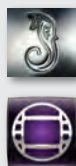
"After about two years of production use, which in this last year has become a quite significant deployment, the flexibility and reliability provided by the PROMISE VTrak J830s units met our expectation."

-Olaf Bärring,
Technical Responsible for Procurement of Servers and Storage
IT Department, CERN

Qualified for use with:
OS X, Final Cut Pro X,
Adobe Premiere Pro, After Effects,
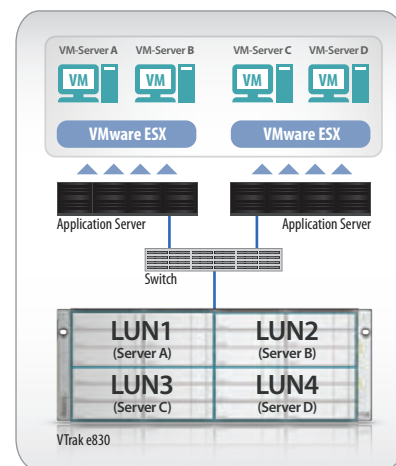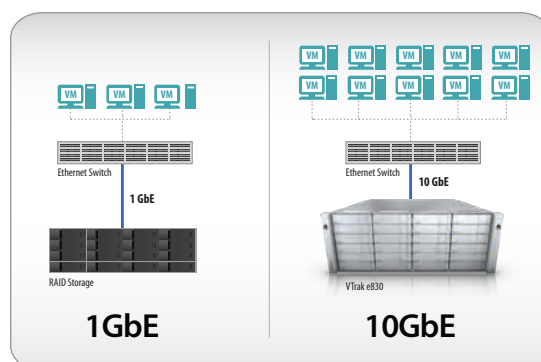*Autodesk Smoke,*
Avid Media Composer

VTrak E-Class is used in some of the world's largest enterprise computing and backup environments. It also truly shines in video creation environments by delivering consistent low latency performance without frame dropping. When used in film and video postproduction, users can scale performance and capacity to support large scale, uncompressed HD workflows.

Data Center: All-Flash Arrays

Data centers where data is mission critical often requires the highest performance for the cloud. Flash arrays enable the optimized speed where performance for key enterprise applications need processing power yet power savings. Fully backward compatible with 3G SAS/SATA devices, users have the ability to deploy 3G and 6G SAS/SATA hard drives and solid state devices (SSD) in the Jx30 series. Efficient power supplies offers provide up to 90% power efficiency that enable the VTrak Jx30 series family to improve total cost of ownership by conserving power, reducing heat output and improving cooling costs. The internal 6G SAS expander-based architecture also allows for transparent access to each drive, enabling full utilization of the power management features built into modern hard drives.

Virtualization

Cloud computing infrastructure requires flexibility and storage management efficiency. Virtualization enables dynamic storage allocations such that physical layers of storage can be utilized most effectively. As virtual machines continue to increase with more virtualized deployments, fibre channel performance optimized where critical complimented with simpler and cost effective 10GbE iSCSI infrastructures will accelerate meeting the bandwidth and storage requirements for the cloud and datacenter.

Ethernet Switch
1 GbE
RAID Storage
1GbE

Ethernet Switch
10 GbE
VTrak e830
10GbE

VM-Server A   VM-Server B   VM-Server C   VM-Server D
VMware ESX   **VMware ESX**
Application Server   Application Server
Switch
| LUN1 (Server A) | LUN2 (Server B) |
| LUN3 (Server C) | LUN4 (Server D) |
VTrak e830

Backup

As consumers and business become more mobile, the need for data access, retrieval, and distribution anywhere at any time means that data must be protected. Data centers, hyperscale computing, and high performance computing not only require performance and reliability, but flexibility and cost-efficiency for tiered storage management. Nearline SAS/SATA JBOD expansion units provide the versatility and scale for such demands.

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VTrak Ex30 Advantages

- Quad 8Gbps FC ports or Dual 10Gb iSCSI ports per controller
- **Fibre Channel performance delivers up to four times more performance than previous generation,** delivering up to 5.5 GB/s for reads and 2.4 GB/s for writes
- High-availability design
- Out-of-the-box support with zero software installation required
- Scale up to 9 expansion chassis for a total of 240 drives
- PerfectFlash enables software updates without requiring downtime
- Administer access control through Open Directory & LDAP
- Energy efficient power supplies offering up to 85% power efficiency
- Qualified solution for OS X, Xsan, and Final Cut Pro
- Certified for Windows, Linux, and StorNext

VTrak Jx30 Advantages

- 3U-16 or 4U-24 form factor featuring hot- swappable drive bays in SBB 2.0 package
- Supports 6G and 3G SAS & SATA drives simultaneously
- Dual active/active SAS JBOD I/O modules
- Up to 85-90% power efficiency
- Up to four 6G mini SAS (4x) ports, two ports per I/O module
- Redundant, hot-swappable Field Replaceable Units (FRUs)
- SES-2 compliant enclosure management
- Compatible with leading SAS & SATA drives, HBAs and RAID controllers

VTrak E-Class

RAID storage subsystem for Big Data, Rich Media, Surveillance, and Virtualization

- Optimized for high performance, high bandwidth rich media applications requiring large block sequential IOPs.
- Active-Active, dual-controller and fail-over capabilities, which assures enterprise users a "no single point of failure" storage environment.
- High-speed 8Gbps host connectivity coupled with massive internal bandwidth, the VTrak Ex30f features 6Gbps SAS/SATA drive technology.
- Powered by next-generation processing power from Intel, the Xeon C3500 Series processors, the VTrak x30 unleashes tomorrow's performance, today.

intel inside® Xeon

Featuring Intel Xeon™ C5500/3500

VTrak J-Class

VTrak JBOD expansion units for Backup, Archiving, and Data Center

- The VTrak Jx30 series 6G SAS subsystems deliver a high performance SAS solution with advanced enterprise level reliability and functionality.
- The Jx30 series offers the full redundancy that is expected of an enterprise solution.
- Designed with high-availability in mind, the VTrak x30 series expansion chassis family supports dual active-active JBOD I/O modules allowing for redundant data paths to ensure data availability while dual power supplies and cooling fans are in place to minimize downtime and any disruption to business continuity.
- The VTrak Jx30 expansion chassis is available in a 3U/16-bay, 4U/24-bay or an ultra-dense 4U/60-bay.
- Delivered in a Storage Bridge Bay (SBB) 2.0 compliant package, the Jx30 series offers the full redundancy that is expected of an enterprise solution.

VTrak Family

A3800	E830	E630	J830	J630	J930
4U / 24-bay	4U / 24-bay	3U / 16-bay	4U / 24-bay	3U / 16-bay	"High Density" 4U / 60-bay
Up to twenty-four 3.5"/ 2.5" HDDs or SSDs	Up to twenty-four 3.5"/ 2.5" HDDs or SSDs	Up to sixteen 3.5"/ 2.5" HDDs or SSDs	Up to twenty-four 3.5"/ 2.5" HDDs or SSDs	Up to sixteen 3.5"/ 2.5" HDDs or SSDs	Up to sixty 3.5"/ 2.5" HDDs or SSDs

VTrak Ex30/Jx30

Capacity	48TB to 7PB raw
	Non-disruptive expansion using:
	VTrak x30 Fibre Channel / iSCSI RAID Storage Systems
	VTrak x30 Expansion Chassis (Up to 9 cascading JBODs)
	Max LUNs: 32 per array, 1024 per subsystem
	2GB cache per controller
	Single or dual controller
Drive Support	NL-SAS 7200 RPM: 6 Gbps, 3Gbps / SATA: 6Gbps, 3Gbps and 1.5Gbps / SSD
	Supports any mix of SAS, SATA, or SSD drives simultaneously in the same enclosure
Availability	Redundant controllers
	Hot-swappable controllers, power supply units, and disk drives
	Non-disruptive firmware/software updates
Interface	Quad 8G Fibre Channel ports per controller (total of 8 ports for high-availability systems)
	10Gb iSCSI (option)
	Each I/O module has four 6G SAS ports using industry standard Mini SAS 4x wideport-SAS connectors (SFF-8088)
RAID Levels	RAID 0, 1, 5, 6, 10, 50, 60
Power Efficiency	Four levels of advanced power management disk drive (MAID) support
	Efficient 80Plus Certified power supplies
Management Interface	Single VTrakFS™ file system SAN management software
	Embedded management using VTrak A-Class SAN management software (via Ethernet)
	Advanced Command Line Interface (Serial Port or Ethernet via telnet and SSH)
	Third Party Management support via SNMP, CIM
Client Licenses	10 Universal or 30 Mac Only included (VTrak A-Class)
OS Support	OS X/OS X Server (10.8), Microsoft Windows Server 2008 w/SP2, Microsoft Windows Server 2008 R2, Windows Server 2012,
	RedHat Enterprise Linux 6.2, RedHat Enterprise Linux 6.3, SuSE Linux Enterprise Server 11.2, VMware ESX Server 5.1, VMware

Edit and Playback Video Faster than Ever Before

Faster processor, more memory, faster FC ports is just the beginning. Enhanced cached mirroring design, auto-regeneration of data to mitigate frame drops and optimized disk access all add up to more performance for broadcast and editing environments.

Redesigned WebPAM PROe Management Suite

Designed with simplicity in mind, the all-new WebPAM PROe takes VTrak storage management to a new level. Included are automatic configurations tuned for common applications, non-disruptive software updates, power savings scheduler, performance and power monitoring statistics, drag-and-drop LUN mapping/masking and more. Every thing you need is built in – just login through Safari.

PROMISE 3-Year Warranty

Every VTrak x30 subsystem is backed by the PROMISE 3-Year limited warranty with 24/7 (Americas & EMEA) telephone and email support. In addition to our industry-leading warranty, PROMISE offers extended warranty and onsite parts replacement options with service levels with onsite response times as low as 4 hours.

Big Data – Simplified. Optimized.