



ReadVerify Appliance

Highlights

- Fully maximize existing tape library assets
- Identifies drive usage imbalances
- Proactively identify degrading media and tape drives
- Isolate issues down to root causes
- Validate regulatory and SLA compliance

ReadVerify® Appliance (RVA) 4.0

Overview

A tape library, with its associated drives and media, represent a significant investment in a data center's disaster recovery and archive infrastructure. However, while storage applications provide feedback on the success or failure of a data transfer, little information is available on resource efficiency or root cause failure isolation. Data transfer failures and tape errors can be the result of a complex mix of issues relating to the tape drives, media, network and applications. Crossroads ReadVerify® Appliance (RVA) provides a non-intrusive method for monitoring, validating and reporting on the performance, utilization and health of the physical tape library environment.

Key Features & Benefits

Maximize Utilization and Performance of the Tape Library

With the information provided in RVA's reports, an administrator can maximize and balance the utilization and performance of the library's tape drives. This leads to: completing backup jobs on time, minimizing purchases of unnecessary drives, eliminating maintenance on unneeded equipment and preventing premature wear of over-used resources.

Minimize Data Risk

By monitoring the health and integrity of the tape drives and media, RVA provides a proactive indication of data at risk. RVA tracks and correlates reported media errors on tapes and drives over their effective life, providing the means to determine whether the media or device is operating below manufacturers recommended standards. By swiftly identifying the degrading asset, corrective action can be taken to quickly minimize risk to data. Also, rapid problem identification reduces personal overhead required for unscheduled data recovery activities.

Automated Reports and Real-Time Alerts

RVA reports on multiple tape and drive parameters, including hard and soft read and write errors, drive performance, occupancy and utilization, load counts, drive status conditions, and cleaning history. RVA real-time alerts are individually enabled and configured to trigger at user-defined thresholds. Media and drive metrics are accessible through the life of the resource and beyond. Through an intuitive Web-based console, RVA displays graphs and statistics on the library, tape drives and media, exposing tape subsystem metrics for quick analysis. Also, RVA provides a mechanism for third-party applications to access its database for expanded reporting capability.

Simple, Non-Intrusive Installation

RVA plugs seamlessly into the Fibre Channel SAN to collect statistics directly from the tape library and tape drives. Agentless installation is available either as single 1U appliance, or as a Vsphere client in a VMware ESXi 4.1 environment. RVA collects information during the actual data transfers, providing unique visibility into the interaction of the storage applications with the tape library resources.

Optional ArchiveVerify™ Ensures All Tape Media is Readable

ArchiveVerify (AV) is an optional feature for RVA that enables users to ensure what has been written to tape media can be read for recovery or compliance audits. AV offers a completely automated process to validate media readability based on administrator-applied policies. Verification procedures test the entire written length of written media with no disruption of existing operations, all while the data remains securely within the library. Quick Verify for LTO media, a feature of AV, gathers a wide variety of cartridge data from the media, providing detailed visibility into the cartridge history.

RVA Specifications

Physical Specifications

Form Factor	1U
SAN Connectivity	1, 2, 4 GB FC Support
AC Power	100-240 VAC auto-sensing 50/60 Hz, 4.0 amps

Power and Reset Switch Yes

System LEDs Power/fault, system overheat,
and hard disk activity

Ethernet LEDs status and activity

Width 42.6 cm (16.8 in)

Depth 35.8 cm (14.1 in)

Height 4.31 cm (1.72 in, 1U)

Weight 10.4 kg (23 lbs)

Environmental Specifications

Operating Temperature 10 to 40° C

Heat 564 BTUs

Relative Humidity 20 to 80% non-condensing

Regulatory Compliance

ROHS Yes

Safety & Emissions FCC Part 15 Class A, UL 1950,
EN60950, CISPR 22 Class A, CE,
VCCI, AS/NZS 3548 Class A

Specifications – RV300vm

VMware Specifications

VMware ESXi 4.1 vSphere Client

Server Must Support VMware
VMDirectPath

Memory allocation 4 GB RAM
250 GB local disk

I/O allocation 2 Ethernet NICs

Fibre Channel connection ATTO Celerity FC-42ES HBA
(purchased separately)

System Monitoring

Utilization and performance per drive and across drives in a system

Activity by drive and cartridge

Monitors read/write errors per tape and per drive

System inventory and status

Policy-based Alerting and Reporting

Daily reporting on storage system activity

Weekly reporting on slots, cartridge usage, over/under utilized
drives and drive performance

Alerts on backup impact conditions, such as communication loss
or stuck tape

Alerts and reporting on specific drive and cartridge
write/read/load errors

Database of historical usage and reported errors

Management Access

10/100/1000 Ethernet RJ-45 port for FTP and Web-based
management console

DHCP support

SNMP support

Field-updatable firmware

Email notification

Single RVA Supported Configuration

Up to 250 devices where a device is a library, library partition
or tape drive

Up to 2 independent SAN fabrics

Up to 100,000 occupied tape slots



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ABOUT CROSSROADS

Crossroads Systems, Inc. (NASDAQ: CRDS), is a global provider of solutions and services that ensure stored data is proactively protected and reliably recovered. Crossroads offers organizations powerful data protection, proactive data security, intelligent storage connectivity, unmatched performance, and significant cost savings. Founded in 1996 and headquartered in Austin, Texas, Crossroads holds more than 100 patents granted and pending and has been honored with numerous industry awards for innovation in data protection and storage. Visit www.crossroads.com.

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