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# Spectra Logic RXT

## OVERALL RATINGS

<b>Installation</b>		The installation is quite clever and avoids incorrect cabling. However, we would like to see the cables included with the kit and DHCP enabled.
<b>Manageability/Configuration</b>		The unit is very easy to use but includes system reporting only when installed in the T950 tape library.
<b>Operation/Functionality</b>		We found that the restore speeds more resembled tape than disk.
<b>Recoverability</b>		Recovery worked without problems, but RAID settings cannot be set by the customer.
<b>Problem Resolution and Support</b>		Solid documentation and responsive, competent technical support.
<b>Interoperability</b>		Requires dynamic drive sharing for multiple servers; SabreMedia and SabreDrives are completely proprietary.
<b>User Level</b>		Suitable for entry-level storage administrators
<b>List Price as Tested</b>	\$5,995-\$11,995	Price for standalone drive with one media pack, depending upon capacity.

Scale: 1 flame = poor; 2 flames = fair; 3 flames = satisfactory; 4 flames = very good; 5 flames = excellent

User level: ● = novice; ■ = intermediate; ◆ = advanced; ◆◆ = experts only

## PRODUCT SUMMARY

For more than 26 years, Spectra Logic has been competing successfully against much larger foes, largely based on innovative engineering. The company's RXT product follows in that tradition by introducing unique technology that delivers an interesting combination of disk- and tape-data protection. The RXT product tested is removable disk technology that uses a "SabreMedia" pack that holds 12 100 GB SATA disk drives for a total capacity of 1.2 TB. Packs are also available in two- and four drive configurations in varying capacities that range from 500GB to 2TB per SabreMedia pack. SabreMedia has the same dimensions as Spectra's T950 TeraPack tape media packages. In fact, that's the element that makes RXT so interesting: It can be combined in an automated tape library. SabreMedia fits into the same slots as TeraPacks, and SabreDrives (the specialized drives needed to read SabreMedia) fit into the same sleds as tape drives. Thus, SabreMedia can be barcoded, moved, stored and managed just like tapes, but with the greater reliability of hard disk technology. Backup and recovery applications will treat RXT as just another tape resource.

The RXT unit that we reviewed was the stand-alone device. Our test environment included backup server (dual processor Xeon system with 2 GB of RAM, Windows 2003 Server) using Backup Exec 10d. The RXT SabreDrive connects to the server via SCSI, which worked fine. However, we think this is an ideal application for iSCSI; the company has indicated that iSCSI and NFS will be supported in the future. The management console connects using Ethernet. But an Ethernet cable is not included with the kit, which sent us scrambling around the lab for the right cable. Most organizations have spare cables, but it would be nice to just plug the unit in without having to hunt around for a part essential to the task. The installation guide was very good, and we had no problem installing and configuring the unit. We were able to begin backing up data in less than 30 minutes from the time we cracked open the shipping box.

SabreMedia is very simple and conceptually no more than a big tape. In fact, we think the simplicity has perhaps come at the expense of usability. The documentation explains that SabreMedia is available in RAID 0, RAID 0+1, and RAID 5. Unfortunately, it did not tell us that the RAID level is set at the factory and is not user configurable. We spent a bit of time trying to set it,

### **About the Review**

*Diogenes Analytical Laboratories and SearchStorage.com teamed together to create disk-to-disk buyer's guidelines that help IT buyers differentiate between products and select the best candidates for their own situation. For this report, we took 13 different products into the lab and ran them through their paces. We compared products based on ease-of-use, manageability, features/functions and technical support systems. Our opinions are based on the experience of more than a decade of implementing and managing data protection systems.*

and we finally got the story after contacting Spectra's technical support group. Of course, it makes sense that two- and four-drive configurations would not support RAID 5. However, we would like to have as much flexibility as possible on the larger packs.

When a drive fails in a SabreMedia pack, customers have three options: maintain an onsite spare and install it themselves, have a spare shipped and install it themselves, or return the pack for depot maintenance. A broken SabreMedia is similar to a broken tape, except that it can be repaired. IT organizations will want to follow best-practices for duplicating media to assure that a volume needed for restore is available.

A major advantage of the RXT architecture is its

infinitely scalable capacity. Capacity is added with each SabreMedia element. There is no need to add cabinets or additional infrastructure to gain space. Obviously, throughput can be increased only with additional SabreDrives. It must be noted, however, that SabreMedia cannot be read by any device other than a SabreDrive.

The stand-alone unit that we evaluated did not include any system reporting such as threshold warnings or capacity management. To determine capacity and utilization, the administrator must log into the GUI and verify the information visually. IT organizations must adopt procedures to assure that sufficient capacity is available for upcoming backup jobs -- or risk job failure. However, RXT devices installed in the T950 will benefit from the reporting functionality of the library.

RXT has advantages that typical VTLs do not have, such as easily scalable capacity. At the same time, it has such tape-oriented limitations as sequential access through large objects. SabreMedia packs cannot be divided into virtual-media elements, so a 2 TB pack will behave like a 2 TB tape cartridge. We think RXT will be a very interesting solution to organizations that store large files with infrequent but certain access requirements. Such circumstances would include geophysical data, medical imaging and media streaming.

## DIFFERENTIATING FEATURES AND FUNCTIONS

FEATURE/FUNCTION	DESCRIPTION
<i>Removable Disk Media</i>	<i>RXT is one of the few devices that allow disk media to be removed and stored off-site via Iron Mountain or other services. This media also can be used in automated devices, such as the Spectra T950. Removable media is available in RAID 0, RAID 1, RAID 0+1, and RAID 5 configurations.</i>
<i>Scalability</i>	<i>Capacity scalability is as easy as adding more media. Throughput can be increased with added SabreDrives. Additional cabinets are needed only in an automated environment if the T950 needs to be expanded.</i>

## BUYER GUIDANCE

### ***Kudos:***

RXT is an innovative variation on virtual-tape technology. It is very simple to implement and configure and has easy capacity scalability. Spectra implemented innovative engineering elements into the product. IT organizations can apply existing tape management policies (e.g., off-site vaulting) to RXT media yet benefit from the greater reliability of disk technology. RXT is available as a stand-alone product, but it is best suited to an automated environment.

### ***Caveat:***

RXT's tape-like architecture has retained some of the limitations of tape, such as sequential access to large objects. RXT media cannot be divided into virtual media elements, so a 2 TB pack will behave like a 2 TB tape cartridge. However, unlike actual tape media, RXT media is proprietary and requires an RXT drive to be read.

### ***Who should consider this product:***

RXT is ideally suited to geophysical, medical imaging and streaming media applications.

## ABOUT DIOGENES ANALYTICAL LABORATORIES, INC

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