

Ethernet Connected Data Backups

Enhancing data security and accessibility with network-enabled tape connectivity

Background

Tape storage is generating a renewed interest because of its ability to keep data safe from cyber-threats and ransomware. This renewed interest stems from several factors, including improvements in tape technology itself and its ability to provide robust protection against cyber-attacks. As organizations face increasingly sophisticated cyber threats, IT leaders and architects are turning to tape storage to keep their important data secure.

Tape backup provides an additional layer of security that only physical media can provide.

As data volumes surge, IT budgets remain constrained. Transitioning from tape to cloud storage poses challenges for organizations with extensive historical data. It demands significant resources and effort to ensure a safe data transfer. Hence, many find it simpler to stick with tape backups, using them predominantly for archiving or as a secondary storage solution. In addition to compliance and regulatory requirements, the rapid adoption of Artificial Intelligence and Machine Learning platforms is generating substantial amount of data, essential for ongoing learning and training of these systems. Applications as such necessitates prolonger retention of data for longer periods.

Despite the convenience and competitive value proposition of cloud storage, tape storage is gaining popularity in modern workflows, especially for data recovery and resilience.

Challenge

Traditionally, tape technology has paralleled disk interfaces in its integration with computing and networking systems, including Fibre Channel (FC) and Serial-Attached SCSI (SAS). Given its historical role primarily as an archival medium, tape

connectivity has rarely experienced innovation or development, often remaining tied to a server responsible for daily tape backups. If the backup server experiences a failure, conducting backups becomes impossible. In present-day clustered environments, another server can step in to handle primary NAS storage responsibilities. However, since tape drives are directly connected, the secondary server must have its own tape library attached to it. This also prevents disaggregation of tape storage devices from compute and primary storage, which is essential for a robust disaster recovery and mitigation strategy.

IT leaders are starting to realize that achieving a fine balance between cost, management, and performance in an environment where applications and users are continuously competing for resources is increasingly becoming a challenge. This in turn is affecting backup windows, storage reliability, and data accessibility; thereby compromising data protection amidst exponentially growing data.

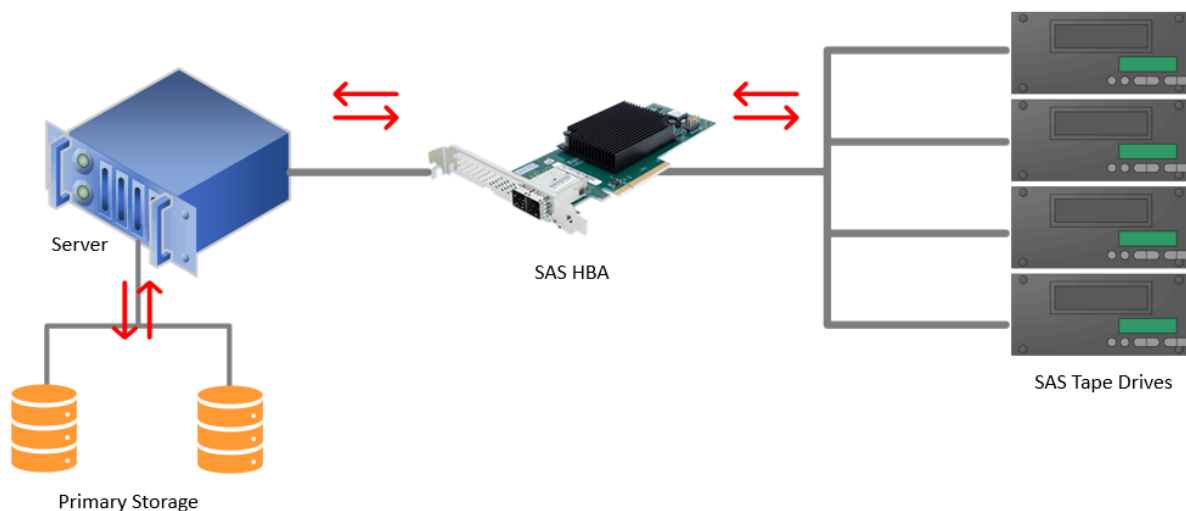


Fig: Implementing tape connectivity in a direct-attached fashion limits its utilization and benefits offered.

While extracting the benefits of tape in modern workflows, where Ethernet is dominant, was less explored, using iSCSI Ethernet-based networking presents a simple, cost-effective, and scalable means to share tape storage devices on the LAN. This approach allows organizations of all sizes to easily incorporate tape backups into their workflows - improving data availability, management, and resilience throughout its lifecycle in an IT environment where downtime risks are unavoidable.

Solution:

Tapping into the ubiquity and advantages of iSCSI Ethernet, **ATTO XstreamCORE ET 8100T** extends Ethernet connectivity to SAS Tape drives without the cost and complexity involved in traditional tape storage implementation. Offering a reliable and robust means to share up to 4 SAS Tape drives, XstreamCORE 8100T is an intelligent bridging device that introduces a simplified and scalable alternative to integrating tape backups into modern workflows.

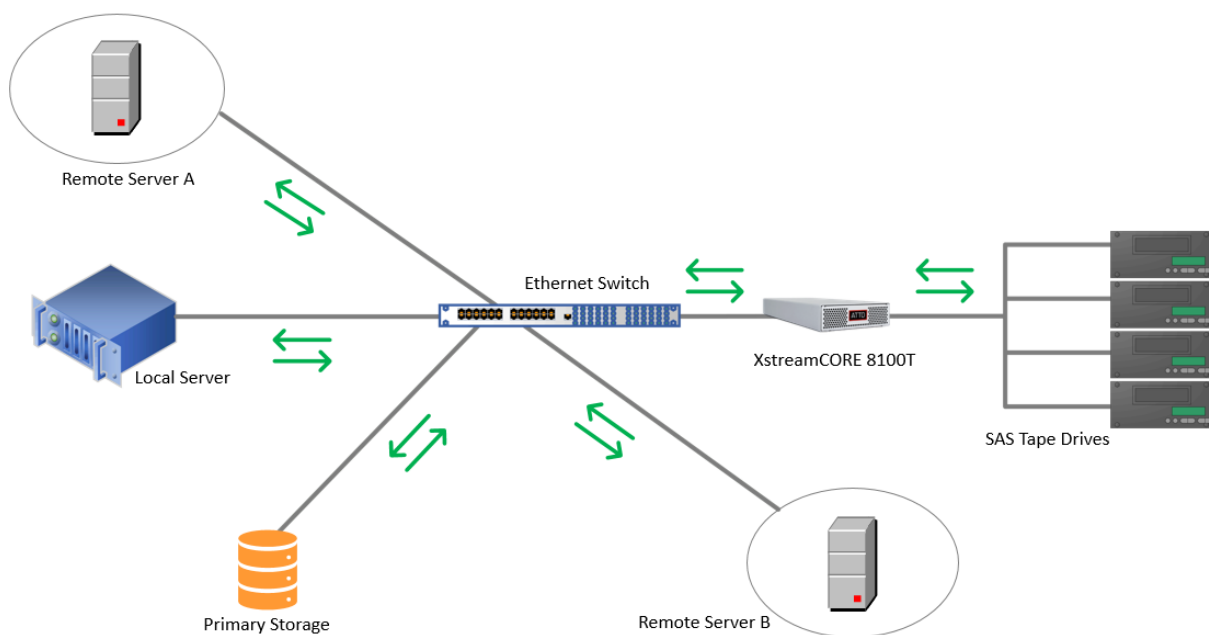


Fig: Disaggregating tape storage from compute enables incorporation of tape-based backups in different stages of the IT workflow.

The tape drives (or library) appears to the operating system and the backup application in the same way as if it were attached directly through a SAS HBA. Therefore, the configuration of backup software over Ethernet is identical to a direct attached solution. No additional licenses or features are needed from the backup software provider. This refined approach also allows one to backup not only local data but any data that resides on any other server or workstation connected to the bridge without the need for a centralized backup server. Since

the 8100T is connected to the Ethernet network, the physical placement of your tape library does not limit its utilization anymore. Backups can be performed to the tape media by different workgroups, further improving productivity and saving time. Time is Money!

With integrated technologies such as *SpeedWrite* and *Advanced Data Streaming*, the 8100T combats inefficiencies that affect performance and backup windows with ease. To ensure better Ethernet network performance, a tuning profile for 8100T on ATTO 360 ensures enhanced optimization to eliminate costly downtime with intelligent network diagnostics and troubleshooting capabilities.

Simple. Scalable. Shareable.

- Ethernet connectivity for small - medium sized SAS tape libraries
- Easy and simple to use desktop (or) rackmount unit
- Dual 10GbE ports for connectivity for up to 4 iSCSI hosts
- Single x4 12Gb/s Mini-SAS HD connector – for up to 4 SAS Tape drives
- Supports LTO 7 (or) later
- Leading backup application software (ISV) support
- LTFs support for file level, faster data access and effective tape management
- Supports SAS TLR capabilities
- Allows tape drives to be mapped to hosts
- Operating system independent - iSCSI initiator required



Product Availability – April, 2024

SKU: XCET-8100-TS0 – Optical SFP+

SKU: XCET-8100-TN0 – RJ45/Copper



Energy efficient design with low power consumption providing significant savings in cost and cooling.

ATTO XstreamCORE 8100T provides a simple, scalable, and shareable means for backup and archiving workflows using SAS Tape drives over an iSCSI/Ethernet network.

ATTO