



Catalogic DPX: NetApp Archive to Disk, Cloud and Tape

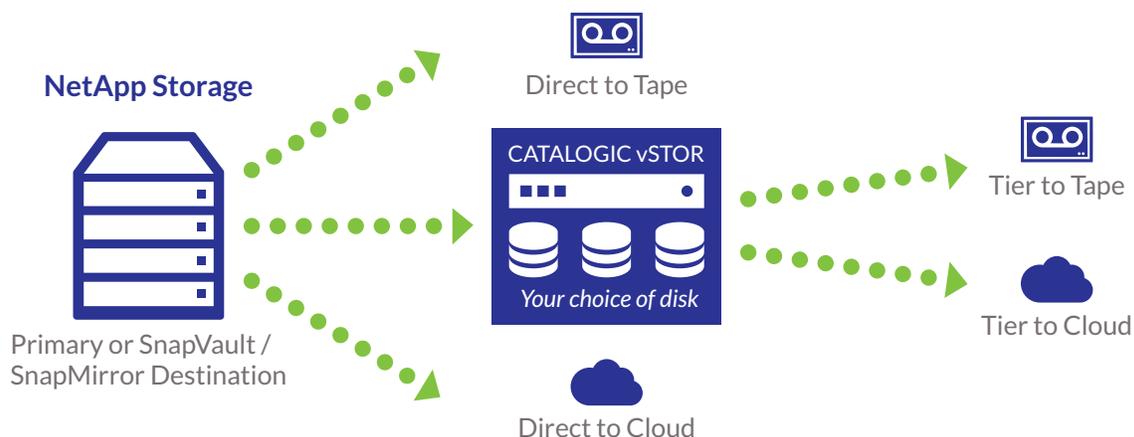
Easy. Customizable. Powerful.

DPX Archive Highlights

- Supports NDMP backups for NetApp storage
- Backup to tape, disk or cloud for long-term data archiving
- Innovative, cost-effective licensing options
- Supports NetApp SMTape backup
- Supports NetApp CAB (Cluster Aware Backup), an NDMP v4 protocol extension
- Standalone archive support, or integrated with a full backup solution

Data retention requirements are making long-term data archive nearly as critical as short-term restore needs. But many organizations are either inadequately archiving data, or paying far more than they should to get the job done.

Catalogic DPX provides a cost-effective solution for long-term data archiving in NetApp storage environments. DPX archives data to disk, tape, and/or cloud in any combination, allowing organizations to grow and change based on their requirements, while also minimizing costs. DPX gives you investment protection while meeting your compliance needs for long-term data retention. Don't retire your data: ensure that it is always available and usable when needed.



DPX offers many options for archiving data. This includes direct archive from NetApp storage to disk, tape or cloud, or a tiered option where data is first moved to disk (via Catalogic vStor) and then tiered to tape or cloud.



NDMP (Network Data Management Protocol) provides an open standard for network-based backup of network-attached storage (NAS) devices. NDMP is a valuable tool for protecting NAS data, as well as offloading it for long-term storage to disk, tape or cloud.

Catalogic helped pioneer NDMP backups and remains a leader in supporting NDMP for NetApp and other compliant NAS systems. With Catalogic DPX, you can have an easy to use and extremely cost-effective standalone NDMP solution, or you can deploy DPX as a complete backup solution, with NDMP as a component.

Archive Media Flexibility

With DPX, you get the storage flexibility to best meet your archival and compliance needs. DPX supports archive to disk, tape and/or cloud for long-term data archive. Data can also be tiered from one target to the next.

Backup to disk provides a near-line copy of data that can be accessed quickly for day-to-day data recovery needs (beyond what you might have available via primary NAS snapshots). With a storage efficient target device, such as Catalogic vStor, storage savings can extend on-disk retention time. vStor is a software-defined storage solution that lets you create a cost-efficient archival target using the storage hardware of your choice. Disk is often used as a short-term archive location, with data tiered off to tape or cloud for longer retention.

Backup to tape offers the most cost-effective solution for truly long-term storage that is measured in months or years. With DPX, file-level restore granularity is possible, allowing for targeted restores. Tape also allows for off-site storage in secure, audited bunker facilities, which can be critical for meeting compliance goals.

Backup to cloud provides an economic tape alternative also suitable for long-term storage when tape is not desirable. Cloud backup is similar to tape functionally, but data storage is outsourced to a third-party cloud vendor. While effective, a careful review of cloud provider data access costs is warranted, especially if many restores are expected.

For more details on each backup target, see the table “Pros and Cons for Each Archive Storage Type.”

Pros and Cons of Each Archive Storage Type

There is no single best choice for archive data: it all depends on your organizational requirements for things such as retention time, RTO, CAPEX vs. OPEX spending, and so on.

This table summarizes some of the pros and cons of each major archive storage type.

Disk	Tape	Cloud
Pros		
<ul style="list-style-type: none"> • Easy to grow capacity • Easy to replace individual disks in the event of failure • Multiple vendor options and cost ranges • Flexible and well understood attachment options (direct attached, FC, iSCSI, etc.) • High backup throughput and fast restore times 	<ul style="list-style-type: none"> • Cost-effective in terms of storage capacity (lowest price per TB) • Low external costs (power, cooling, floor space) • Large capacity media, e.g. 12 TB per tape with LTO-8 (30 TB compressed) • Easy transport and off-site storage • 30-year shelf life (with appropriate handling) • Built-in encryption and compression • Standardized long-lifespan connection interface (SCSI, FCL) • Established technology with well-defined growth path for several future generations (new generation approx. every 2-3 years) • Backward compatible for two generations 	<ul style="list-style-type: none"> • Pay-as-you-go model requires no initial large investment • Extreme capacity, effectively unlimited • Easy to grow or reduce capacity • No IT maintenance required • High reliability • Choice of data redundancy options • Provides long-term storage options • Technology changes are transparent to the customer • Data is easily shared
Cons		
<ul style="list-style-type: none"> • Not cost effective for off-line or long-term storage • Relatively short lifespans and high failure rates • Requires special housing facilities which add to overall costs (power, cooling) • High use of floorspace relative to storage capacity • Frequent technology and interface updates which make older generation hardware unusable • Not reliable for long-term storage (years) 	<ul style="list-style-type: none"> • Requires special tape drive or tape library • High initial investment, but quick breakeven point • Proper storage conditions required to achieve maximum shelf life • Drives and libraries require periodic maintenance and cleaning • Not as easily plugged in and brought online as disk • If re-used often (approx. 100 times), tapes are prone to wear and tear. Therefore, better suited for long-term archive. • Linear, sequential data storage plus physical loading into drive – may take several minutes to load tape, locate data and start recovery. 	<ul style="list-style-type: none"> • On-going expenses • Some cloud-based storage may charge for retrieving data (egress charge) • Slow data access due to data being across WAN (some direct access options may mitigate this) • Faster access may require increase in WAN capacity and cost • Not suitable for quick access of large data sets, which may also add a cost premium • Data is held outside of organizational control – complete dependence on the provider • Any loss of WAN connectivity means no access to data

Reduce Your Backup Licensing Costs

DPX offers highly affordable licensing for NDMP backups that are used for archiving data. Many organizations license NDMP backups as part of their overall capacity licensing for their backup software. However, because file data volumes tend to be large and constantly growing, file backup and archive may comprise a large percentage of your total backup licensing costs. By switching to Catalogic DPX for your archive needs, you can keep the remainder of your backup environment intact while gaining significant cost savings. And because NDMP backups are based on NetApp storage devices, the transition is easy to manage. You aren't faced with re-configuring backup jobs for hundreds or thousands of servers.

World Class Support

Catalogic engineering and support organizations have been working with NDMP from its inception. We have many experts on staff with a long history of supporting NDMP and other backup technologies. With Catalogic, you can rest assured that your critical archive deployment is in the best possible hands.

Tape Encryption

DPX supports hardware encryption for tape drives attached to a NetApp device. With hardware encryption, the tape device encrypts data as it is written to the tape. Encryption keys are generated through the DPX keyring function. Restoring from encrypted tapes is transparent.

Conclusion

Archiving data for long-term retention is an integral part of your data protection strategy. Compliance, audit and legal requirements demand long-term retention for many types of data. Catalogic is a leader and innovator in this technology. We can easily add data archiving to any existing data protection strategy to assist in completing your overall requirements in a cost-effective manner.

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50 Tice Boulevard, Suite 110
Woodcliff Lake, NJ 07677 U.S.A.
201.249.8980
catalogicsoftware.com

United Kingdom: +44 (0) 207 712 1667
Germany: +49 (0) 2102 307614 0
Netherlands: + 31 (0) 20 347 23 88



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