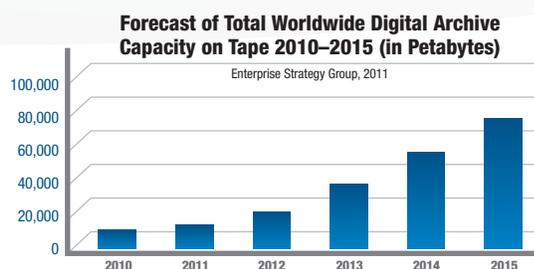# NEO Series Archive Solutions

The latest IDC Digital Universe Study results for 2011 show that the amount of data being stored is more than doubling every two years, and by 2020 could grow 50 times. As a result, IT managers are faced with daunting storage issues: data is growing faster than they can manage, data types are different, costs to maintain the data are sky-rocketing, data is vulnerable to corruption threats and backup repositories are growing.

Backup vs. Archive

In a study conducted by the University of California Santa Cruz, it was determined that 90% of data stored on disk was never accessed again and that another 6.5% of the data was only accessed once. Because disk is an expensive place to store massive amounts of infrequently accessed data, best practices recommend backing up multiple, point in time copies to a combination of disk and tape – providing an affordable operational and disaster recovery solution. A recent Google email outage reinforced the importance of tape for backup when software bugs affected several copies of data and Google had to rely on tape backups to recover user data.

However, backup is not the same as archive. While backup refers to a copy of data that may be used to restore the original in the event the latter is lost or damaged beyond repair, archive refers to a single set or collection of historical data specifically selected for long-term retention and future reference. Archived data is primarily static information that is moved to less expensive storage after 30 days. It is not a copy of data—it is original data that is removed from its initial location and sent elsewhere (i.e. to tape) for long-term retention. Moving the data to tape reduces backup storage requirements, reduces costs, improves use of valuable floor space, improves energy efficiency, provides a higher level of data security and improves performance of networks and disk-based backup systems. As a result, ESG states "tape is set to experience a sixfold increase in digital archive petabytes stored from 2010 to 2015."

Forecast of Total Worldwide Digital Archive Capacity on Tape 2010–2015 (in Petabytes)

Enterprise Strategy Group, 2011

Curtis Preston, former backup administrator and well-known backup and recovery industry observer for more than 15 years sums it up best, "...there is no other medium that offers what tape does for archiving."

Archiving with NEO Series Libraries

NEO Series® tape libraries provide the capacities, features and efficiencies needed for archived data. Consider the following ways in which NEO can help you meet your archiving needs:
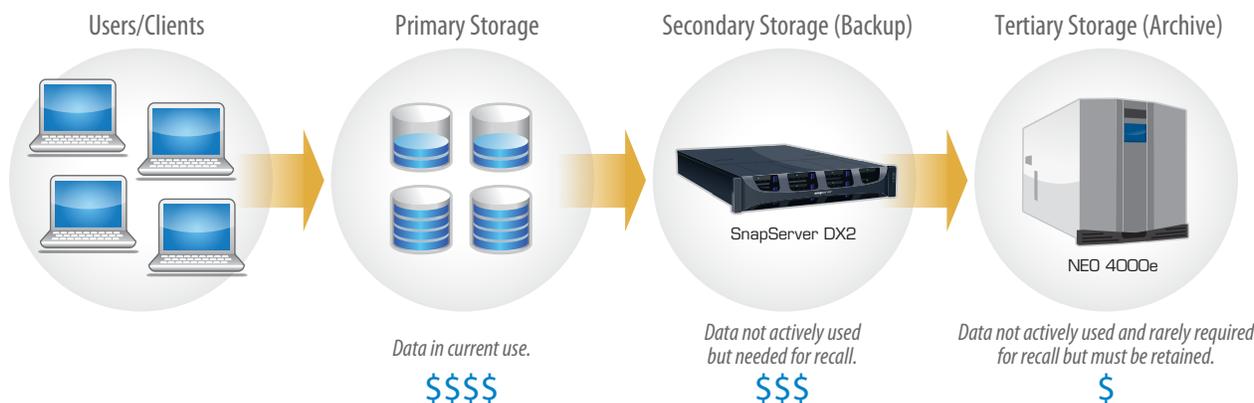
- **High capacity** — with storage capacities ranging from 9.6TB to 3PB, NEO Series libraries deliver a flexible amount of storage capacity designed to meet your data archiving needs.

- **High speed data retrieval** — should you be called upon to retrieve archived data, NEO series libraries ensure that you can get it back quickly – with data transfer speeds of up to 24 TB/hr – allowing you to more effectively meet your SLAs (service level agreements) for archived data.

	ARCHIVE CAPACITY	DATA TRANSFER SPEED
NEO 100s	7.2TB - 27TB	Up to 1TB/hr
NEO 200s	9.6TB - 72TB	Up to 2TB/hr
NEO 400s	38.4TB - 144TB	Up to 4TB/hr
NEO 2000s	24TB - 720TB	Up to 16TB/hr
NEO 4000s	48TB - 720TB	Up to 16TB/hr
NEO 8000s	80TB - 3PB	Up to 24TB/hr

- **Low Total Cost of Ownership** — even with cloud storage prices as low as $.10/GB, NEO libraries still deliver storage that is 1/5th the cost of cloud-based data archive. With an average cost of just $.02/GB, NEO Series tape libraries offer one of the lowest costs per gigabyte for long-term storage.

  Add in the fact that NEO libraries occupy minimal rack or floor space and utilize significantly less energy than other archive solutions, and NEO reduces your product, service, operational and administrative costs for long-term data archive.

- **Longevity** — because archive is all about the long-term storage of data, having a solution you can count for years – even decades – is vital. Delivering a media shelf life of 30 years, robotic mechanisms that are designed to move a cartridge up to 4,000,000 times before a potential failure, and tape drives that are designed to run 250,000 hours before a potential failure, NEO Series libraries ensure your data is there when you need it for as long as you need it.

- **Portability** — tape media is designed to be easily and reliably transported offsite. NEO Series tape libraries take it a step further by utilizing removable magazines that enable users to easily and securely extract multiple data cartridges from the library. This approach facilitates transport of the media offsite for disaster recovery purposes, ensuring that even in the event of a natural disaster, you still have access to archived data.

- **Security** — because NEO Series media is removable and able to be stored off-line, archived data is protected from the threats of viruses, hackers and cyber attacks. Access to the NEO library is password protected to prevent unauthorized access to archive data while hardware encryption technology ensures that data archived on tape remains at rest. Tape cartridges are also available with WORM capability to prevent accidental and/or intentional overwriting of data archived on the tape.

- **File-level access** — exciting new LTFS (Linear Tape File System) technology available in LTO5 solutions has been designed specifically for archive applications and protects archived data at file-level access. This allows a files on the tape cartridge to be directly read by the host, appearing more like a disk drive with "drag & drop" functionality, thus reducing the reliance on 3rd party software applications for retrieval of archived data.

- **Scalability** — NEO E-Series libraries provide the flexibility to seamlessly add and/or reconfigure your archive capacity and performance based on the needs of your business. This ensures customers receive the best possible protection of their storage investment.

- **Manageability** — NEO Series libraries provide convenient management of archived data, either through the library itself or via web-based remote management functionality. This ensures the availability of archived data without utilizing excessive valuable IT resources.

Whether you are archiving historical records of emails and documents, medical records (sometimes for the life of the patient), media and entertainment digital video content, video surveillance data, corporate intellectual property or any other type of corporate data, there is no more affordable, reliable final destination for your company's most valuable asset than a NEO Series library.

Users/Clients	Primary Storage	Secondary Storage (Backup)	Tertiary Storage (Archive)
	Data in current use.	SnapServer DX2 — Data not actively used but needed for recall.	NEO 4000e — Data not actively used and rarely required for recall but must be retained.
	$$$$	$$$	$

Sales Offices

Overland storage

NEOAS-SB0412-01