

## Data Dynamics StorageX 7.0 – Intelligent Policy Based File Data Migration

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### Background, Issues and Trends

There is no such thing as a data or information recession<sup>1</sup>. Likewise, people and data are living longer as well as getting larger<sup>2</sup>. These span various use cases from traditional to personal or at work productivity.



From little to big data content, collaboration including file or document sharing to rich media applications all of which are leveraging unstructured data. For example, email, word processing back-office documents, web and text files, presentations (e.g. PowerPoint), photos, audio and video among others. These macro trends result in the continued growth of unstructured Network Attached Storage (NAS) file data.

Unstructured NAS file storage is popular given its ease of use, flexibility, scalability for both little and big data. For example NAS includes Network File System (NFS), Windows CIFS (Common Internet File System) aka SAMBA or SMB (not to be confused with Small Medium Business) access protocols. NAS scalability includes performance, availability and capacity on a cost effective basis for traditional physical, virtual and cloud (public, private and hybrid) environments.

However, there are issues to contend with:

- Supporting growth with tight budgets
- Lack of resource and data visibility
- Cost of enabling agility of systems and data
- Data center, server and storage consolidation
- Technology upgrades, refresh or replacement
- Movement to private and public cloud
- Archiving for compliance and non-regulatory
- Storage tiering and file optimization
- Local and remote storage management

<sup>1</sup> There is no such thing as a data or information recession  
<http://tinyurl.com/8gb3fjd>

<sup>2</sup> People and data are living longer and getting larger  
<http://tinyurl.com/o3p58d2>

### Challenges and Opportunities

Building off the previous mentioned trends are the resulting challenges for organizations of all size. Many enterprises buy varying types of storage from multiple vendors to meet specific business needs. For example storage solutions from Dell, EMC, HDS, HP, IBM, NetApp or Oracle among others including Windows server based storage, each with their own proprietary device management tools and APIs.

A challenge with unstructured NAS file data is that it lacks structure for managing it. Another challenge is applying management structure without adding barriers inhibiting its flexibility and ease of use.

Other NAS file data challenges include:

- Unstructured NAS file storage migration
- Timely migration across different storage
- Mix of big & little data, large and small files
- Different storage vendors and locations
- Multiple vendor tools and interfaces
- Mix of Windows and Unix/Linux data
- Data protection including BC and DR
- Not knowing what data exists where
- Coordinating local and remote resources
- Discovery and insight into storage usage
- Central manage of distributed resources

Opportunities for improving NAS include:

- Spend more time using data vs. managing it
- Enable flexibility and data mobility
- Enhance data protection and archiving
- Gaining insight into resources and their use
- Support growth and longer data retention
- Remove complexity and cost
- Finding and fix problems vs. moving them
- Add structure without compromise
- Apply automated policy based management

Thus, a common theme is adding management including automated data movement and migration to implement structure around unstructured NAS file data.

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### What is needed?

Data migration can be in support of planned technology upgrades or refreshes, changes in suppliers, consolidation, BC, DR and archiving, movement to private clouds, or optimizing for consolidation or storage tiering across different vendors and technology.

The solution should reduce the amount of time, errors and complexity associated with data migration across homogenous and heterogeneous environments.

Essential attributes include:

- ✓ Policy based automated migration
- ✓ Movement within and across locations
- ✓ Support different vendors tools and APIs
- ✓ Provide insight and awareness into files
- ✓ Automated classify and reporting
- ✓ Central unified view of local and remote data
- ✓ Leverage industry standard protocols
- ✓ Out-of-band (sits outside data path) access
- ✓ Flexible data migration options
- ✓ Work with both NFS and CIFS storage
- ✓ Protect and preserve data and meta-data
- ✓ Non-distributed data movement while in use
- ✓ Be time and cost effective, easy to use

### Value Proposition

Such a solution should also provide a positive measureable ROI (both return on investment and return on innovation) across IT infrastructures, staffing and services.

Business benefits of a smart data migration solution should include and enable:

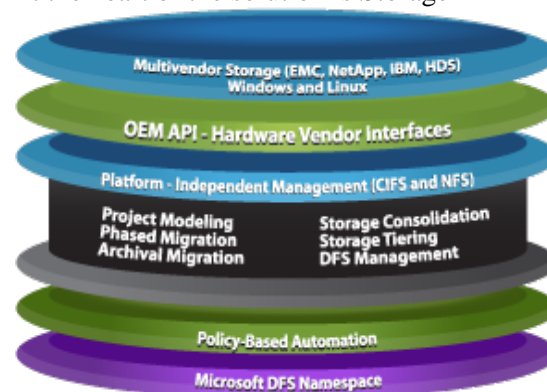
- Address both operating and capital costs
- Removes complexity and cost with scale
- Enables infrastructures agility and flexibility
- Vendor and technology agnostic
- Timely insight into resource usage
- Facilitate just in time storage acquisitions
- Reduces Mean Time To Migration (MTTM)
  - Reduce project startup / completion time
  - Expedite hardware deployments
  - Maximize storage expenditure ROI
  - Gain insight into usage patterns
  - Framework for movement between clouds

### Solution and Technology: StorageX

More than a data mover or storage migration tool, Data Dynamics StorageX is a software platform for adding storage management structure around unstructured local and distributed NAS file data. This includes heterogeneous vendor support across different storage system, protocols and tools including Windows CIFS and Unix/Linux NFS.

StorageX provides storage infrastructure management capabilities that allow storage professionals to logically view distributed file storage, and then use policies to automate data movement across heterogeneous storage infrastructures.

At the heart of the solution is StorageX



StorageX features include:

- Policy based unstructured file management
- Local and remote data movement
- Automated storage tiering and migration
- Support across different vendors technology
- Discovery of NAS file servers and systems
- Analysis (configuration validation)
- Seamless integration into your environment
- Facilitate moving data to private clouds

StorageX provides seamless integration into your storage environment by being out of band (outside of the data path) in addition to supporting standard interfaces (NFS, CIFS) and APIs. Using the Microsoft DFS namespace providers administrators a single unified view of NAS file data across different vendors and locations.

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### StorageX solution (continued)

How StorageX works:

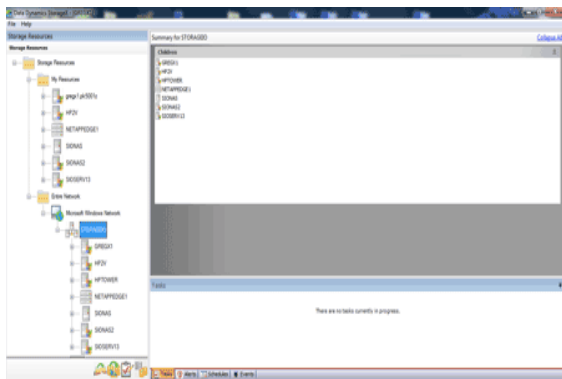
- Install StorageX on to one of your servers<sup>3</sup>
- Create policies with wizards and templates
- Discover files on servers and NAS systems
- Perform baseline copy and analysis
- Subsequent copies to insure consistency
- Verification of data and meta-data moved

Is it that simple?

Relatively speaking, yes.

Granted there are a few more steps and things that need to be done, particular for larger projects that are more involved or environments. For example deciding to run the migration automated or take later action.

Using file based along with byte level replication provides flexibility as well as robust performance when moving data, particularly over slower networks with remote locations.



Screen shot from my StorageX 7.0 test drive

StorageX provides timely insight into NAS file activity including when data created, last accessed, type (e.g. video, audio, documents), size, if shared among other information. With this and other information, storage administrators can find and fix problems vs. simply moving them elsewhere.

<sup>3</sup>This can be a physical server, or a virtual machine such as VMware based with network access to storage and servers with NFS or CIFS shares.

### StorageX solution test drive

Seeing is believing and by that, I mean it is one thing to view a webcast or WebEx demo. It is another thing to actually be able to install the tool or technology into your own environment and give it a test drive. That is what I did by downloading a copy of StorageX 7.0 and installing into my environment.

Once installed, I was able to use StorageX to discover, as well as give it guidance on what to include in its inventory of NAS and file servers. Using the discovered systems, StorageX was able to further profile those and facilitate creation of migration policies for tiering, archiving along with moving some items to a new filer. One of the things that caught my attention when using StorageX 7.0 is import of known systems for larger environments.

As for the customer support experience, it was great and refreshing to talk with people whom know the product as well as how to use it. This included walking me through some database setup items as well as talking through the theory of operation from discovery to project create, migration and optimization.

### Strategies and Recommendations

As I mentioned talk is one thing, see for yourself how StorageX works. Give it a trial in your environment for moving, migrating and managing data for upgrades, consolidation, archiving and storage tiering.

Learn more about Data Dynamics StorageX on the web at [www.datadynamicsinc.com/](http://www.datadynamicsinc.com/)



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