EBOOK

Five Key Steps of a Fast, Accurate NAS Migration

Datadobi

The Complexities and Risks of a NAS Migration

If you're planning a network-attached storage (NAS) platform migration at the enterprise level, you're likely aware of how daunting a project it can become. And the complexities of moving unstructured data have been compounded by its proliferation over the last decade. In fact, Gartner estimates that approximately 80% of enterprise data is unstructured today.[1] And with these larger and more complex datasets growing within an organization, a more modern, reliable approach to migrations is critical. Indeed, according to Gartner, 83% of data migration projects either fail or exceed their budgets and schedules.[2]

For a project team executing a NAS platform migration, the many and varied tasks that need to be performed can be overwhelming – both the complexity and associated risk. Without the aid of dedicated migration software, a NAS platform migration can potentially mean:

- High cost of both internal and external personnel
- Increased risk across all aspects of the project from data integrity to reputation of the migration team
- Increased number of switchover events with extended outage durations
- Disruption to the business
- Lack of proper reporting and governance
- Skilled staff distracted by migrations instead of working on strategic initiatives

All these challenges can be avoided or significantly mitigated by following a solid migration process.

1. Source: IDC, Worldwide Semiannual Big Data and Analytics Spending Guide, August 2018

2. Source: Gartner, Risks and Challenges in Data Migrations and Conversions

Five Key Steps of a Fast, Accurate NAS Migration

In NAS platform migrations, the process, tools, and support resources used are important factors for success. Datadobi has refined its approach and software through a large number of complex NAS migrations since 2010. Here are the five essential steps we recommend to minimize risk and to ensure success on your NAS migration project.

Discovery and Analysis

Before starting a migration you want to ask yourself questions such as:

- What kind of content is present on the source system: application based, end-user based, or a mix?
- How much capacity is present?
- How many files are present? Are they large, small, or a mix?
- Are there any complex datasets such as WORM (immutable data with retention periods assigned), shared access multiprotocol, etc.?

Legacy tools provide no capabilities for this phase and instead force migration teams to piece together very basic information into static spreadsheets, which do not provide a solid basis for planning and managing a migration project. Instead, you want to use migration software that interrogates the configuration of NAS endpoints and offers views into the characteristics of the datasets those devices serve to the client community.

Planning and Design

Once discovery and analysis of the environment is complete, you can begin the planning and design phase. Communication with stakeholders such as application owners, end users, and any other relevant party is key.

A few things you want to determine along with stakeholders are:

- Will all existing data be migrated or will specific shares/exports, directories, file types, or other exclusions apply?
- Will there be any reorganization of the directory trees or will all filesystem structures be migrated in their current form?
- Are there deadlines dictating that certain content be prioritized?
- Can groups of application owners and/or end-user communities agree on cutover event schedules and agree on a tolerable amount of downtime?

Based on the results and determinations made during this phase, you'll want to use migration software that allows you to create migration policies that will run automatically when the execution phase of the migration begins.

Migration Execution

The migration execution phase is where file content is actually being copied and kept synchronized between the source and target systems. Historically, this would be the phase where migration scripts using different copy tools (depending on the protocol(s) in use) would be loaded onto a collection of copy hosts. The scripts would have to be put into the operating system scheduler for each type of copy host (Microsoft® Windows® vs Unix/Linux), and workload across servers would not be load balanced.

Instead, you want to use modern migration software that allows you to graphically define migration policies dictating what content gets copied between the source and target, the frequency at which that content is resyncronized, and a single pane of glass for easy monitoring and management.

Additionally, you want migration software that will allow you to proactively schedule cutover events and even perform "dry runs," allowing you to execute switchover plans prior to the actual event. The result of the "dry run" provides an accurate prediction of the time required for the actual event. Taking the guesswork out of cutover windows is critical since the event windows to which stakeholders have agreed must be honored.

Verification and Reporting

The ability to report on all migration activities is key to keeping stakeholders updated on a regular basis and to also adapt to changes that occur in the environment while the migration is running. Changes in the environment can equate to new storage resources being added to the source (e.g., new volumes, new shares/exports, etc.), changes in the source system workload such that throttling changes are required, or even decisions by stakeholders to change security characteristics as the content is copied.

After individual switchover events and after the completion of an entire migration, it is important to provide stakeholders with reports showing the results of the migration and to provide assurance that all file content was copied and that the file content was validated for accuracy as it was copied.

You want to use migration software that verifies file copies at the content level and provides high-level reporting down to file-level detailed reporting.

Tools and Support

Selecting migration software to discover, plan, execute, and report on the migration project is key to success. Not only is the software important; equally important is the company and the support organization behind it.

Legacy migration software such as Robocopy and rsync combined with static migration plans being created in spreadsheets is simply not up to the task of executing migrations with the size and complexity encountered with modern enterprise NAS environments. Legacy tools also lack any formal technical support, leaving migration teams searching blogs and other resources on the internet when, not if, problems are encountered.

Get to Your New NAS Platform with Less Risk and More Speed

DobiMigrate® is a software-based migration solution created specifically to address the biggest challenges of unstructured data migrations for the enterprise. DobiMigrate helps you:

- Realize return on investment (ROI) faster on your new platform.
- Save money and reduce risk by leveraging a policy-driven automated approach.
- Rest easy knowing every single migrated file is validated via hash digest calculations.
- Free IT personnel to focus on value-added projects instead.

Contact Datadobi to learn more about how you can minimize the risk and duration of a NAS migration using DobiMigrate.

datadobi.com