NAS MEETS SRM: THE STORAGE "SWEET SPOT" FOR SMBs

WHITE PAPER

NORTHERN STORAGE SUITE
VERSION: 2005 SR4
DATE: 2007-03-26

NORTHERN PARKLIFE, INC. / WWW.NORTHERN.NET / INFO@NORTHERN.NET

1. SMB VS. ENTERPRISE: DIFFERENCES AND SIMILARITIES

A key difference between SMBs and large enterprises is, obviously, scale, in terms of size and complexity, exposure to risks, barriers to business continuity, and the scope of deployed IT resources (servers, networks, storage, etc.). The loss of a server in an enterprise environment may impact that organization's business operations, but the loss of an individual server in an SMB could bring the entire operation to a screeching halt.

However, when you consider the problems both grapple with, there is more in common than you might initially think. As is the case in larger environments, SMBs deal with data protection, archiving, security, and availability issues, all while data inexorably escalates, bringing with it added pressure and problems. Indeed, data availability is a pressing issue for SMBs that require uninterrupted access–as they realize that anything less puts them at a major competitive disadvantage.

SMBs have not been well served by storage vendors that have only relatively recently placed this segment in their crosshairs. However, that is changing, as SMBs are demanding the same functionality and reliability as their larger competitors. While vendors are rushing to address this growing demand, easier manageability and scalability remain insufficiently addressed. As SMBs continue to increase their storage capacity, they will be facing a new set of challenges in 2007 and beyond.

Because of the rapid growth and increased storage density within even the smallest organization, the need for a more reliable storage infrastructure has become paramount. The problem is that most of these organizations just do not have the resources to run the typical network storage system. However, the need for such an environment still remains.

For the SMB, the challenge is to effectively apply technology that was invented for the enterprise with its vaster staffing resources. Sure, SMB IT professionals are becoming savvier with storage and data protection, and can leverage new features and functions available to them. However, while many vendors have begun to focus on delivering easy-to-deploy, manage-and-use storage for SMBs, most SMBs continue to struggle to acquire, manage, and protect their storage infrastructures while responding to new business demands.

2. SMB AND NAS

According to AMI Partners, currently, 40 percent of all IT spending is generated by SMBs, yet they account for only 20 percent of overall storage spending. AMI expects storage spending to increase by 18 to 20 percent over the next few years in the SMB segment. This is consistent with projections that SMB network-attached storage (NAS) sales will double year over year for 2007, and 2008.

The greater complexity of SAN and the availability of low-cost NAS have made NAS a very attractive option for SMBs. As data continues to grow, SMBs take the path of least resistance and opt for the most affordable solutions, rather

than determine how an initially pricier, high-performance solution might be a more efficient and less costly option over time.

One expects the more expensive solutions to deliver better performance, but they are typically more complex to install, configure, and administer, and often come bundled with advanced features not required by the SMB. Small business owners generally adopt simple NAS products that deliver good price points but offer modest to poor performance. However, as we've noted, smaller companies have less of an IT infrastructure, and many can't afford to have a dedicated IT person, much less an IT department. For the relatively small number of SMBs that do have the IT resources, a storage-area network (SAN) server takes a lot more of their time than a NAS appliance. In addition, it requires a Fiber Channel storage networking professional to manage it on a regular basis–again, a non-starter for the overwhelming percentage of SMBs.

NAS is a lot less costly and complex to manage, and it is easier and cheaper than SANs, making it suited not only for SMBs but also for workgroups and departments of large organizations that need to centrally manage and consolidate large amounts of data. The growing SMB acceptance of NAS is also based on its ability to facilitate file sharing, data consolidation, and backup consolidation. NAS will become an even more viable option as the market matures and improved management capabilities and more enhanced features are introduced into this segment.

3. NAS AND SRM

For the reasons cited above, NAS technology is ideal for SMBs–it is cost-effective, easier to manage than a SAN, and is scaleable. However, vendors as well as SMBs themselves, continue to struggle in finding the sweet spot–where functionality meets manageability. In other words, where is the middle ground between ease-of-use and a feature set that promotes proactive data management?

According to Gartner analyst Pushan Rinnen, SMBs can control storage growth without adding capacity by better managing their storage networks. She says fewer than 30 percent of respondents plan to implement information lifecycle management (ILM) strategies–many SMBs have failed to understand that implementing ILM can help solve their problems with growing capacity. SMBs can implement an ILM strategy using NAS technology in concert with storage resource management (SRM) software. The following two sections illustrate how.

SRM software is implemented for a variety of reasons. Most organizations see both the short- and long- term benefits of using and managing storage economically. In some cases, the economical benefits are secondary–IT embraces SRM as a means of solving problems they find tedious, repetitious, and time-consuming. In other instances, SRM enables businesses to regulate content, i.e., restricting recreational or private material, or content that might potentially result in a lawsuit on grounds of copyright infringement or sexual harassment. However, no matter what drives an SRM implementation, one

objective universally applies: making an otherwise cumbersome process more efficient, easier-to-control, transparent, reliable, and stress-free.

The market teems with SRM products, from those offering minimal quota management to software/hardware “solutions” that go well beyond what most would agree are core SRM functions. Some of the latest SRM products offer sophisticated performance tuning and analysis and automated provisioning. On the other end of the spectrum, some SRM offerings provide little more than basic capacity planning and resource allocation. Indeed, many organizations implement SRM only to find their problems compounded.

Organizations–particularly SMBs–implementing an SRM tool need to first understand the fundamental difference between storing data and managing it. The former merely approaches it from a "housing" or capacity perspective. The latter seeks to extract value from your data: making it readily available to facilitate efficient business processes and communications–key advantages in today's fast-paced digital economy. Companies realize further bottom-line benefits by reducing admin overhead. Viewed from this perspective, storage management is no longer strictly an IT concern; it is intrinsic to the way your company performs and competes.

The amount of information organizations store increases about 60 percent each year. However, it is estimated that, at most, only 15 percent of everything stored is strategically important. The sheer volume of excess data–whether it is outdated, of no intrinsic value, or simply redundant–adds time and hassle to information retrieval. Which, over time, can be a major drag on productivity and compromise your organization’s ability to compete in today’s ever-shortening business cycles.

Reactive data management–as opposed to intelligent information management– leaves a number of important issues unanswered. Traceability, quality control, and compliance with legislation such as Sarbanes-Oxley, requires that organizations put in place a sophisticated system that goes well beyond passive data storage. Such a system needs to embed the intelligence necessary for administrators and users to prioritize and easily manage data, making what’s most important easily accessible.

This growing realization is bringing together senior management and the IT team in assigning value to information and determining how to manage it by establishing rules regarding what and how much is stored. Assuring that information is up-to-date and that critical information is available on-demand has implications for just about all aspects of business, from efficient and responsive customer relations, to arming your sales force with real-time information they need to be effective. SRM software is more than a tool to manage storage devices or report on file system or database utilization. When combined with NAS technology, it is central to an organization’s ability to manage, access, and use information, which is the first and most critical measure of an SRM tool’s value…as it has a direct correlation to an SMB’s ability to conduct business and compete.

4. BEST PRACTICES FOR APPLYING SRM TO NAS

Having developed the industry-standard for enterprise-based SRM, we worked closely with a number of SMBs in a variety of sectors. These SMBs used NAS devices as a cost-effective and more manageable means of housing their data. Some experimented with SRM software, others had a conceptual appreciation for what an SRM solution could deliver in the way of efficient storage management. However, only a small fraction actually used an SRM package due to the complexity and, in some cases, sheer overkill.

Gaining a first-hand understanding of the needs and challenges many SMBs share, we tailored Northern Storage Suite to work hand-in-glove with NAS technology. Further, we developed an approach based on best practices; the following scenarios illustrate best practices for applying SRM to the most widely shared storage-related challenges among SMBs.

A). RECLAIMING CAPACITY USING NORTHERN STORAGE SUITE

CHALLENGE: Unchecked disk consumption can escalate into a significant drain on a company's time and resources–in terms of this paper, NAS resources specifically. The amount of information organizations store increases by about 60 percent each year. However, it is estimated that, at most, only 15 percent of everything stored is strategically significant. A typical organization is spending around 85 percent of its total storage budget on obsolete, duplicate, non-business related, and illegal files.

SOLUTION: Use two of Northern Storage Suite's five key feature sets in concert– Northern Storage Reporter and Northern Storage Assistant to identify problem areas, then automatically reclaim space on the NAS device(s). Northern Storage Reporter delivers comprehensive reports and trend analysis, enabling you to drill-down to glean the exact information you require. Northern Storage Assistant allows you to automatically monitor events and trigger pre-set actions based on these events– scheduled/triggered operations include delete, move, copy files, replicate directories, or execute programs. Many organizations are astonished to learn how much capacity they can reclaim–and the efficiencies that result: faster backups and more efficient and reliable restore processes. Once Storage Reporter identifies where unwanted files are stored, Northern Storage Assistant can be configured to crawl the network each night at a fixed time to automatically find and delete unwanted files

B). PLANNING FOR THE FUTURE USING NORTHERN STORAGE SUITE

CHALLENGE: Tracking and projecting storage usage on the NAS device and providing a mechanism for effective usage control. According to a recent survey conducted by the University of California, it is estimated that 1.5 billion terabytes of new information are created each year. Scalable NAS devices, such as NetApp filers, are ideally suited to cope with escalating storage needs; when additional space is required, the NAS device can be expanded.

SOLUTION: Northern Storage Suite makes it easy to identify current usage trends and forecast "full-dates" on the NAS device. Once you run reports over

a period of, say, 30 days, to determine usage trends, you can then design a policy of usage control via a "chargeback" framework that assigns costs to increments of storage used. This information can then be used to project "hard" storage costs at current levels. Once you have a complete picture of usage trends and associated costs, you can then use chargeback as an "enforcement" mechanism to keep usage (as well as costs) within acceptable limits. This will enable you to carefully monitor and manage growth–unobtrusively and automatically–and remain always several steps ahead of any potential problems.

C). CONTROLLING USER DATA WITH NORTHERN STORAGE SUITE

CHALLENGE: In the majority of industries, an organization's users are directly responsible for over 90 percent of stored data. Those users see the possibility to store data as a right and are not aware of the often crippling costs involved. It is at the user level that storage costs can be cut; as many SMB organizations we've worked with have learned, increasing storage capacity–and availability–despite the falling costs of everything from hard disks to NAS devices, will increase rather than decrease costs.

SOLUTION: Storage Reporter can be used to identify a reasonable upper limit of usage for the user population; the suite's Quota Server engine enforces this upper limit and triggers Storage Portal notifications that in turn raise user awareness. Northern Storage Portal provides end users with the knowledge and tools needed to intelligently and economically manage their own storage use. The portal gives users the ability to move, archive, or delete files to keep within their allotted ceiling, providing an all but self-maintaining storage management system.

D). SELF-MANAGING STORAGE USING NORTHERN STORAGE SUITE

CHALLENGE: With terabytes of user data, an organization's storage capacity is constantly in jeopardy of being swamped. While purchasing disk space is perceived to be cheap, this fails to account for the additional management required to perform routine backups and restores, to ongoing monitoring and maintenance–all of which represents significant added costs (up to twenty times the cost of storage hardware). Implementing a solution that takes too much control over how specific user data is to be handled–for instance, an automated solution that deletes or moves data based on a date or event trigger–could make valuable user data unavailable.

SOLUTION: Northern Storage Suite implicitly recognizes that automation is not a solution by itself, but rather needs to be augmented by a framework that gives users the ability to exercise a modicum of control over their data. Deploying the Storage Portal and communicating its value to users can dramatically reduce aggregate usage. The suite provides a welcome balance: admins can automate what makes sense to automate (setting quotas, running reports, triggering backup routines, etc.) and users have a means of managing and safeguarding their own data via access to a personalized web-based portal.

5. CONCLUSION

SRM has become a central aspect of IT strategy. Managing stored data, understanding and controlling the user behavior that creates it, and continually monitoring the storage resources that house it are no longer processes that can be left to chance–SRM has become a requirement in all organizations where efficiency and manageability are goals.

A component part of SRM is the provision of hardware resources; making sure there is disk space available for files to be stored. This is why NAS devices are being integrated into more and more environments as a high-value method of adding capacity. Of course, simply adding capacity is not a solution in itself– the goals to ensure efficiency and manageability are not achieved by new capacity alone.

A recently published report showed that none of the companies surveyed used more than 50 percent of the licensed enterprise application functionality–which is very much the case with many of today's more "ambitious" SRM packages. This paper focuses on the most broadly shared SRM-related challenges among SMBs and shows how you can use Northern Storage Suite in conjunction with NAS technology to address them.

The most effective means of managing storage infrastructure is to manage user data. SRM and NAS is more than a solution for managing storage devices or reporting on file system or database utilization. It is central to your ability to manage, access, and use information, which is the first and most critical measure of an SRM tool's value. Assuring that information is up-to-date and that critical information is readily available on-demand has far-reaching implications for just about every aspect of your business, from efficient and responsive customer relations to arming your sales force with real-time information they need to be effective. Simply put, choosing the right SRM-NAS solution can make your organization vastly more efficient and effective.

ABOUT NORTHERN

Northern is an international software company specializing in the development of reliable, flexible and easy to use solutions for Windows Server Solutions storage administration. The company serves a global market through its two bases of operations, Tampa [FL] and Stockholm [Sweden]. Over 28,000 organizations, in 52 different countries are using Northern software solutions.

Northern Storage Suite, as well as the company's full complement of network administration utilities, is available through resellers worldwide (spanning 86 countries), authorized distributors and from Northern directly. Customers in North America should contact Northern [US Operations] at 1.800.881.4950 or sales@northern.net. Customer's in other parts of the world should visit Northern's Reseller page on www.northern.net to find their local Northern software supplier, or contact Northern [European Operations] at +46 8 457 50 00.