

# Network-Attached Storage & The SME

## SMEs Need Enterprise-Class NAS Capabilities On A Small-Business Budget

AS A SMALL BUSINESS GROWS and its data center reaches the ranks of a small to mid-sized enterprise, its needs for file sharing begin to change. The SME is faced with the challenge of managing multiple small NAS (network-attached storage) systems really designed for the small-business market or having to swallow the cost and potential complexity of a NAS system designed for the larger enterprise. Now, though, several companies are targeting solutions directly at the SME market, and the key to selecting the right solution is knowing what to look for.

### SME Solutions vs. Small-Business Solutions

The first step is to make sure you are ready for a more data center-class NAS solution. It really comes down to how dependent will you become on the device or how impacted your business will be if it is down or too slow to keep up with the pace of business.

For example, according to Kevin Epstein, vice president of marketing for Drobo

(www.drobo.com), “With a SOHO user or a five- to 10-person SMB, you might get away with not having multiple Ethernet connections for redundancy or having a PC-only or Mac-only solution with minimal management capabilities. You might even forgo data protection and run without RAID.”

For the SME, however, the dependence on the device becomes more critical. “As an SME, your file sharing device is business-critical,” Epstein says. “If the NAS is down, you are at least slowed down and your business may be stopped. The SME NAS needs to have alerting capabilities, redundant connectivity, [and] dual-disk-failure protection. As the SME becomes even more dependent on the NAS, it should have built-in offsite backup, so it can replicate its data elsewhere in an automated way.”

Because SMEs often have limited staff, these capabilities need to work without extensive manual intervention or day-to-day administration. In most cases, SME IT personnel are

already wearing multiple hats and managing multiple systems, so they don’t have the time to become a storage manager.

Another key capability is integration with other technologies in the SME data center. “A good example of this is complete integration with Active Directory (AD),” says Andres Rodriguez, CEO of Nasuni (www.nasuni.com). Unlike smaller businesses, Rodriguez says, “the SME has invested in directory services like AD and wants to leverage that investment instead of having to re-key usernames and passwords.”

The major challenge with SME NAS is that SMEs have a need for enterprise feature sets and in some cases near-enterprise performance, but they do not have enterprise budgets. “SMEs don’t have the luxury of buying storage systems for specific tasks; doing so would waste money and bury the IT staff in administration efforts,” says Kelly Murphy, CEO of Gridstore (www.gridstore.com). “They need a system that can meet the demand of varied workloads from relatively large amounts of data-centric users.”

Rani Osnat, vice president of marketing for CTERA Networks (www.ctera.com), adds that SMEs also need to accommodate for rapid growth. “The SME tends to scale their capacity requirements at a disproportionate rate compared to other segments of the NAS market,” Osnat says. “This means they need the ability to easily add local capacity and should potentially be looking to offload that capacity as the data ages.”

### Key SME NAS Features

An SME’s key goals are security, accessibility, and simplicity when it comes to NAS solutions. As the SME grows, so does the NAS that supports the organization, and managing that growth and making sure the data is always available to the organization is critical for success. SMEs will need different features to help reach those goals.

For example, Osnat suggests looking for NAS solutions with cloud connectivity. “The cloud can provide extra offsite data protection,” Osnat says. “With that comes the need

### Key Points

- SMEs’ NAS needs are approaching those of larger enterprises, but SMEs often lack the budget dollars to match.
- The key is to look for solutions that can accommodate an increasing dependence on shared data access while not requiring system management time that the SME does not have.
- Scale-out storage capacity is a key factor for SME NAS solutions because it enables SMEs to adjust their storage to match their needs.

for security and encryption so that data moving to and being stored in the cloud can be securely held.”

Rodriguez adds, “The cloud helps the SME simplify the ripple effect of tasks that come from implementing an SME NAS because it combines the processes of capacity management, backup, replication, security, and immutability into a single service.”

Epstein advises that SMEs look for a local NAS device that does more than just RAID. “RAID by itself is complex and does not provide the level of protection that most SMEs are going to require,” he says. “Instead, look for systems that can leverage the available capacity to provide maximum protection.”

Simple expansion of the system is another key feature to look for. Epstein advises that SMEs look for a NAS that can accept drives from any manufacturer to avoid getting locked in and to be able to scale capacity in the most cost-efficient manner.

Murphy sees scale-out storage as the solution for maintaining simplicity while being able to meet the organization’s need for additional capacity. “It is important to have a very cost-effective entry point with a reasonable amount of capacity (10 to 20TB) and then incrementally grow that to whatever size is required,” Murphy says. “The value of a scale-out NAS solution is that as capacity is added, so is extra tolerance and performance.”

### NAS-Worthy SME Applications

Most SMEs want to use their NAS for what NAS was originally intended for—file sharing—unlike enterprise NAS that wants to essentially become the complete storage system. Using NAS as a backup disk for laptops and desktops remains a close second.

Rodriguez also says that a high number of SME NAS users are not really users at all but machines. “Machine-generated data from devices that capture information like medical devices are a top consumer of NAS capacity.” ■

## What’s The Best Expansion Option?

Most experts list managing growth as a key capability for SME NAS solutions. There are three options discussed for expansion: the cloud, in-place drive upgrades, or scale-out storage. Each has advantages and disadvantages.

**Cloud-enabled NAS:** A NAS that leverages cloud storage can offload older data and backup data to a remote storage facility so that you don’t have to continually expand local storage. This method also provides a built-in offsite backup in most cases. The downside is that storage becomes an ongoing hard cost, and there is a monthly or quarterly fee which has to be paid for the data stored in the cloud.

**In-place upgrades:** An in-place upgrade approach means replacing an older, smaller-capacity drive with a higher-capacity drive, leveraging the unit’s rebuild capability to re-create the data that was on the old drive and provide the capacity increase of the new drive. Performance can also improve if faster drives are installed and the system knows how to leverage faster drives for busier data. This is a fairly cost-effective method, but if the needs of the environment outgrow the I/O capacity of the unit, then a new unit needs to be purchased, potentially increasing management overhead.

**Scale-out storage:** A scale-out NAS solution adds capacity by adding nodes (small servers) to the existing system. They are managed as one entity, and each entity comes with additional processing and network performance along with the capacity. The downsides are that the initial implementation may be expensive and it consumes more network ports.

### Study Examines Stumbling Blocks To Digital Transformation

Research from CapGemini Consulting and the MIT Center for Digital Business shows that enterprises are still struggling with what researchers call “digital transformation,” or the use of technology to radically improve an enterprise’s performance or reach. The researchers looked at so-called culture-shocking technologies such as social, analytics, mobile, and embedded devices and presented their findings in a report titled “Digital Transformation: A Roadmap for

Billion-Dollar Organizations.” They found that executives rated their innovation culture at 4.2 on a seven-point scale, and none believed their innovation cultures were as strong as they could be. The research shows that enterprises’ struggles came more from the personnel side of things than technology problems; in fact, 77% of respondents cited missing skills as roadblocks, 55% pointed to culture issues, and 50% blamed ineffective IT.



### IDC Predicts Disappointing Showing For Windows 8 On PCs

Research firm IDC does not have high hopes for Windows 8, the latest OS currently in development from Microsoft, in the traditional PC market. Researcher AI Gillen says the platform will be “largely irrelevant” to traditional PC users and predicts that few will upgrade from Windows 7 to Win8. The new OS aims to serve as a platform for both traditional PCs

and tablet devices, but Gillen says it will offer few benefits for PC users that they don’t already have with Win7, aside from access to an app store. He also predicts that there will be application compatibility issues because of the new OS’ tile-like interface, which makes sense on a tablet but may prove problematic for PCs.

### Java Is Top-Ranked Programming Language; C# On The Move

According to the latest Tiobe Programming Community Index, which ranks programming language popularity,

Java is the favored language, used by 17.56% of developers, followed closely by C, with 17.06%. In third place was C++, used by 8.25%, followed by C#, with 8.21%. Tiobe expects C# to pass C++ in coming months due to Microsoft’s frequent changes, additions, and enhancements to the language; however, C++ will likely remain a major player because it offers better performance and is a stronger choice for mobile applications, Tiobe says. The index is based on the number of courses, third-party vendors, and skilled engineers associated with a programming language.