

## DIRECT-ATTACHED VS. NETWORK-ATTACHED STORAGE WHICH IS THE BETTER STORAGE SOLUTION FOR YOUR BUSINESS?



Storage solutions for your small- to medium-sized businesses (SMB) generally consist of two options: Direct Attached Storage (DAS) or Network-Attached Storage (NAS). But what exactly are DAS and NAS, and which one is right for your business?

As its name suggests, DAS consists of a storage device that is directly attached to a single computer or server via a physical network cable. A NAS device, on the other hand, can be attached anywhere on the network, independent of the network server. Because the NAS box has its own IP address, you can access it directly rather than through the network server. Both DAS and NAS offer a number of benefits to your SMB. However, it's important to understand that DAS has several inherent limitations which NAS solutions do not.

### STORAGE ADMINISTRATION

From the initial setup of the storage environment through day-to-day management, a DAS box requires more storage administration than its NAS equivalent. A DAS device typically needs a Host Bus Adapter (HBA) and significant configuration to work with the server. In contrast, the NAS box plugs right into your network, complete with its own IP address. You do not need an HBA, and many NAS devices are pre-configured to support such common services as the Network File System (NFS) and Common Internet File System (CIFS). As a result, NAS offers true plug-and-play capabilities that enable your server to be up and running in a matter of minutes.

In terms of day-to-day administration, DAS requires more IT resources than its NAS counterpart, particularly when it comes to administering storage for remote locations. Most DAS devices

employ proprietary interfaces and tools that require specialized IT training to operate, and they are not easily managed remotely. In contrast, most NAS solutions include an intuitive management console that can be accessed from any Web browser on the network. As a result, businesses employing a DAS solution will have higher recurring administrative costs than they would with an equivalent NAS solution.

### OPERATIONAL DOWNTIME

Another problem with DAS is operational downtime. Since the storage is attached directly to the network server, there's no way to get to the storage if your server is down for any reason, whether it's a system failure, power interruption or even planned maintenance. Bringing the server back online and completing all necessary reconfiguration for it to work properly with the storage device can take hours. Moreover, since the DAS device is built to serve an array of purposes, it is more prone to system failures itself. But no matter what the cause of downtime, the cost to your business can be extraordinary—particularly if it occurs during business hours.

In a NAS environment, however, the NAS device is independent of the network server, so server downtime has no effect on the storage. What's more, when the server is back online, no time-consuming re-configuration is required. And with a specialized OS intended solely for the purpose of serving data and files to clients, the NAS storage device is remarkably less prone to failure than an equivalent DAS system.

### BUSINESS EFFICIENCY

If your SMB has business-critical data that is either spread across multiple servers on the network or resides in multiple offices, NAS is a more efficient solution than DAS. With DAS, each storage device needs to be administered locally and individually, which can create a significant administrative burden. In a NAS setup, however, you can effectively manage all your storage assets from anywhere on the network using a simple Web interface. With this NAS central management console, you can view the entire network from a single location; monitor and redistribute storage; schedule backups; perform manual backups in cases of server downtime; and receive notifications of problems with any storage assets.

### SECURITY

DAS works well in smaller environments where scalability is not an issue. For example, if your company's storage needs are under 500GB, confined to one server in a single location, and unlikely to

grow beyond those parameters, DAS is a fast, efficient choice. However, if your business is growing or is distributed in any way, DAS quickly becomes a slow and inefficient storage method.

### **SOLVING BUSINESS NEEDS**

Many SMBs lack the specialized IT staff required to manage a complex storage environment. When storage systems are difficult to deploy or maintain, or if they must be managed locally for proper performance, many businesses will manage their storage incorrectly or inconsistently, which leaves critical data vulnerable to catastrophic loss. That's why an effective storage solution for your SMB must provide a combination of reliability, flexibility and ease of use, along with superior performance and solid protection.

The Iomega® StorCenter™ family of NAS storage devices blend EMC® storage and security technologies with intuitive configuration and management tools. The Iomega StorCenter ix2 Network Storage Drive delivers advanced security, storage and content sharing in an easy-to-use product ideal for small networks. Numerous EMC storage and security technologies are built in, and it supports RAID 1 to protect business-critical data. Likewise, the Iomega StorCenter Pro ix4-100 NAS Server is based on enterprise-class EMC storage technology. It offers powerful and affordable network storage for small businesses and remote offices. It includes an easy-to-use interface with robust features, and supports multiple RAID levels to protect business-critical data.



### **CONCLUSION**

Although DAS and NAS are available for approximately the same initial purchase price, NAS features a lower total cost of ownership than an equivalent DAS solution. The NAS also offers superior performance and capabilities, higher reliability, and greater ease of installation, setup, and ongoing administration. If your company does not have a fully staffed IT department, if your storage needs are distributed across more than one location, or if storage downtime would be too costly to absorb, a NAS solution is the best choice for your business.

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