



Drobo Steps Up to the Challenge — Meeting Advanced Storage Needs of the SMB

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Management Summary

Who has a credit card and how does he or she get one? More to the point, who doesn't have at least one? It used to be that the credit card applications would be sent to a list of recent college graduates via a mass mailing. Then, in order to reach an even wider audience, these companies began to solicit recent high school graduates. What's next: nursery schools? It has almost reached a point where anyone who is breathing (including your pet with a Facebook page) will receive at least one application a week. These cards enable the new consumer to go to any store and purchase the item of their choice, even if they do not have the money to pay for it. (Hmmm, sounds like everyone in Washington, DC!) For the young business professional just starting out in a small office or home office (SOHO) environment, this standard type of credit card may do very nicely to get started as an entrepreneur in the business arena. Unfortunately, this type of credit card will not suffice when the entrepreneur expands into the small and medium business (SMB) community. As business begins to grow, a staff of employees appears, requiring additional features and services from your credit card. Fortunately, the credit card companies are quick to respond with an SMB program with additional cards for new employees as they are hired, accounting records for each individual in order to keep track of expenses by employee, and extended credit terms for the rapidly expanding company. These new cards give the small business the funding they need to pay bills, buy equipment, and even take out an advance. Additional credit services, however, are not the only pressing need for the rapidly growing business!

Companies graduating from SOHO status to SMB class also need scalable capabilities from their IT infrastructure, including both processing power and shared storage. As additional work staff is hired on, the needs for more compute power grow as well. In terms of pure CPU resources, this growth can be reflected in an upgrade from a single traditional PC to a PC server with multiple clients, complete with multiple processors running a virtualized environment with multiple cores and threads. These clients can be interconnected to the server via a local area network (LAN) in order for the staff to be able to share resources. However, a server environment means that the staff will also need to share data using an external storage device. With an entire business depending upon it, this storage platform must have high performance, resiliency, scalability, and most of all, easy to use. The SMB is unlikely to have a large enough IT staff where someone can be dedicated to the tasks of storage administration. There are any number of storage vendors who can sell you a system that scales to petabytes (PBs). You, however, do not need and cannot afford most of these offerings.

One that you can afford, however, comes from Drobo, an expert in the small office and home office space. Additionally, Drobo offers a complete family of scalable arrays designed for the SMB. To learn more about Drobo, please read on.

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Storage Requirements for the SMB

The large enterprise data center is not the only data center that is looking for mission- and business-critical storage capacity that can be deployed and managed without the complexity, and price tag, of legacy storage solutions. A Fibre Channel (FC) storage area network (SAN) may have all of the functionality and resiliency that the IT staff could ever want, but it may be too complicated for the average administrator within your computer room (or IT closet).

As with the larger data center, SMBs need to find a way to improve productivity and lower IT costs; not just acquisition costs, but all aspects of the IT infrastructure that increase the total cost of ownership (TCO) of the small data center. The IT staff has lowered the TCO of the server environment by deploying virtualization hypervisors, such as VMware's *vSphere* and Microsoft's *Hyper-V*, in order to utilize the compute resources fully. Unfortunately, by adding additional applications via virtual machines on a single server, the IT staff has placed an additional burden on their storage. The IT staff is looking for a storage platform that has high performance and resiliency, as well as being easy-to-use, scalable, and, most importantly, automated.

Who is Drobo?

Drobo is a rapidly growing company that was founded in 2004 as Data Robotics, a company focused on the storage requirements for the small office, home office (SOHO) community. With 175,000 customers around the world, Drobo has certainly been accepted as a viable vendor of SOHO storage that is advanced, easy-to-use, and scalable, and was priced within reach of these professionals. Last month, they officially changed their corporate name to Drobo.

They provided their first arrays for small offices and creative technology professionals, referred to by Drobo as "prosumer", in June 2007, providing an outstanding combination of sophisticated data protection and management features. These features provided storage professionals with easy-to-use, affordable capacity, using Drobo's unique *BeyondRAID* technology to free users from having to make the decision over which RAID technology to deploy and enabling the addition/replacement of disk drives without regard for device size and type of RAID needed.

Drobo followed up this introduction with

additional SOHO arrays during 2008 and 2009. In November 2009, Drobo added a new, SAN model to its product line, called *DroboElite*, enabling simultaneous access for up to 16 hosts, via two iSCSI interfaces¹, to eight drive bays, using the *BeyondRAID* technology², a first for the entry SMB space. Prior to the Elite (now called the *Drobo B800i*), Drobo released *Drobo-Pro* in April 2009. It also provided access to eight bays and has a NAS connection. With this newest set of announcements in 2011, Drobo has enabled small businesses and storage professionals to access "Big Storage in a Small Box" – in support of file backup and archiving using the *Drobo B800fs*, *Drobo B800i*, and the *Drobo B1200i* for networked attached storage (NAS) and for connection to a storage area network (SAN). Drobo has moved their customer mix from 100% prosumer, to 50% each for prosumer and business, with 25,000 businesses now having adopted Drobo.

Drobo Storage for the SMB

The new Drobo storage systems have been characterized by Drobo as "Drobo for Business". The *Drobo B800fs*, *Drobo B800i*, and the *Drobo B1200i*, are ideally positioned as both primary and secondary storage for use with VMware *vSphere*, Microsoft's *Hyper-V*, *Exchange*, and *Sharepoint*, and popular business solutions. They combine the advanced features of legacy technology with Drobo's ease of use to provide an affordable solution for the SMB data center. The *Drobo B800fs* and the *Drobo B800i* are 8-bay arrays used for file sharing with remote backup and as an iSCSI SAN, while the *B1200i* is a 12-bay, iSCSI-attached SAN. All of these SMB arrays are based upon Drobo's patented *BeyondRAID* technology for dual-drive-failure protection and with thin provisioning and deprovisioning to simplify administration, capacity planning and reclamation problems. They are deployed with carrier-less bays to facilitate hot-swap. They are certified for use with VMware *vSphere*, Citrix *Xen Server*, Microsoft *Exchange*, and Symantec *Backup Exec*. Drobo for Business

¹ iSCSI is an Internet Protocol-based storage networking standard for connecting storage arrays to servers using a high-performance Ethernet pipe. iSCSI is an industry-standard that enables simplified storage networking without the complexity of a Fibre Channel SAN.

² See [The Clipper Group Navigator](http://www.clipper.com/research/TCG2010001.pdf) dated January 8, 2010, entitled *Drobo Upgrades the SOHO Data Center – Enables Enterprise Features for the SMB*, available at <http://www.clipper.com/research/TCG2010001.pdf>

starts at about \$2,500.

The Drobo B800fs was designed to be a storage array deployed in a file-sharing environment, with integrated data replication for SMBs in a desktop or rackmount configuration. The 8-bay chassis with two GbE interfaces to support up to 100 users and up to 24TB of SATA storage, using 3TB drives. The Drobo B800i was designed for use in a cost-effective iSCSI SAN for businesses needing primary or backup storage. With an 8-bay chassis and two GbE ports for iSCSI attachment, the B800i can support up to eight servers with up to 24TB of SATA storage. Like the B800fs, it can be deployed in a desktop or rackmount configuration.

With the B800fs and the B800i building a stronger base, Drobo has now raised the business ceiling with the B1200i.

B1200i

The Drobo B1200i, the newest and most powerful and scalable member of the family, was designed to provide value and simplicity in an iSCSI SAN environment for server virtualization running business-critical applications. With 12 hot-swap bays, the B1200i can scale to 36TB of capacity. With expanded redundancy features, the B1200i provides support for a new, *Automated Data-Aware Tiering* architecture, which solves the SMB performance-tuning challenge. Hot data³ is placed optimally in storage, instantly, in real-time. Drobo adjusts data placement as application workloads change – with no user intervention. As with all Drobo arrays, the B1200i comes with Drobo's own BeyondRAID architecture for continuous data protection. It has three GbE ports for iSCSI connection and an additional GbE port for SAN management.

Drobo Tiering provides application service level optimization across SATA, SAS, and SSD drives. Disk arrays without automated tiering require multiple storage units, with a dedicated shelf for SSD at a high cost. This also implies additional networking and storage tuning for optimization. Drobo Tiering enables the small data center to mix drives within the same, low-cost array. The benefit? The Drobo B1200i can tier multiple applications within the same array, with the data handled in real-time on a per-block basis. This lowers the TCO of the storage environment with an affordable, simplified, and automated architecture creating the most eco-

nomical use of both HDDs and SSDs.

With an application-driven storage architecture, the Drobo B1200i can configure, tune, test, and adjust performance automatically, without requiring an administrator from an IT staff that may not exist. Furthermore, with a street price of \$9,999⁴ for a 12TB SAS array, the Drobo B1200i compares quite favorably with traditional storage options costing in excess of \$26,000 for thin provisioning and tiering in a RAID architecture. Even with SSDs included, the B1200i comes in under \$20K, compared to about \$75,000 for a comparable solution, depending upon the number of SSD drives deployed.

Conclusion

Drobo continues to provide business-class functionality to a market segment that requires this functionality but cannot afford it from the conventional sources. This is the first time that this many features have been made available to an SMB audience at an affordable price. BeyondRAID provides the resiliency that the data center needs to withstand two concurrent drive failures to ensure data availability, thin provisioning with reclamation to enable higher capacity than is physically present, and automated data-aware tiering to optimize performance in real-time for mixed workloads. Additionally, because of the higher level of automation, the operating costs and TCO are lower. Drobo provides the growth SMB with scalable, simplified storage at a reasonable price, storage with enhanced performance and advanced resiliency.

If your data center is experiencing the kind of growth that is dominating every data center around the world and thought that you could not afford this level of functionality, take a close look at Drobo. You may be pleasantly surprised.



³ Data with high read/write activity.

⁴ The MSRP for a 12TB Drobo B1200i is under \$12,000.

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