

## SME-4T

### INTRODUCTION

Commstor NAS is a high performance network storage solution offering an easy setup and an intuitive interface. The Commstor NAS comes with hardware and software that work seamlessly together resulting in a reduced setup time and continued high performance for years to come. In addition we run hours of extensive tests on our NAS before it leaves our facility, to further ensure that the system is running at its best.

Built with a Quad-core processor, 8 GB of memory and Dual Gigabit Ethernet connections, the CommStor NAS delivers the performance required for data-intensive business applications such as accessing databases and multiple PC/MAC backups. With powerful hardware inside the CommStor NAS is a great multi tasker. Optional dual boot drives are also offered for added redundancy.

The user interface offers the customer immense flexibility in terms of the number of disks they would like to create a volume with, the RAID level for the volume, and also assigning permission to specific users to be able to access the data within those volumes.

### DATA PROTECTION

ZFS is designed for data integrity from top to bottom. RAID-Z, the software RAID that is part of ZFS, offers single parity protection like RAID 5, but without the “write hole” vulnerability thanks to the copy-on-write architecture of ZFS. The additional levels RAID-Z2 and RAID-Z3 offer double and triple parity protection, respectively. A software mirror option is also available. The Volumes screen lists each possible parity arrangement based on the number of disks you select when creating a new volume.



Every ZFS filesystem is also verified with checksums from top to bottom to ensure data integrity. If inconsistencies are found, parity blocks can be used to repair corrupt data. A regular scrub is turned on by default and can be rescheduled or configured from the web interface.

### FILE SHARING

File sharing is what the NAS does best. Every major operating system is supported with SMB/CIFS (Windows file shares), NFS (Unix file shares) and AFP (Apple File Shares) as well as FTP, iSCSI (block sharing), WebDAV and other methods of sharing data over the network are available. iSCSI also supports VMware VAAI, Microsoft ODX and Microsoft Windows Server 2008 and 2012 R2 Clustering.

Most operating systems, including Windows, Mac OS X, many Linux distributions, and PC-BSD® can connect using SMB shares with little or no additional configuration needed on the client side. Most Unix-like

operating systems support connecting with NFS out of the box, and free clients are widely available. AFP is primarily used by Mac OSX and is well suited for a network environment that only connects with Macintosh clients. There is also support for Time Machine backups with a few minor tweaks on the system being backed up.

## SNAPSHOTS

Thanks to ZFS, snapshots of the entire filesystem can be made and saved at any time. As long as a snapshot exists, administrators can access files as they were when the snapshot was made.

Snapshots can be made on a one-off basis or scheduled as a cron job from the web interface. At any time, the entire filesystem can be rolled back to the most recent snapshot. Older snapshots can be cloned and accessed to recover data from that version of the filesystem. From the web interface, users can see how much space a particular snapshot is occupying on the volume and delete, clone, or roll back to individual snapshots as needed

## REPLICATION

ZFS Snapshots are more than just local backups - they can be used to create remote backups as well. Replicating snapshots of the filesystem to a remote ZFS filesystem creates a complete duplicate there. Furthermore, additional snapshots of the same filesystem can be sent incrementally, reducing the size of each backup to the changes that were made between snapshots. In case of catastrophic damage to a local ZFS filesystem (such as disk failure in excess of parity protection or irrecoverable log device failure), any backed-up snapshot can be sent to a new ZFS filesystem, recovering all data up to that backup.

The Web Interface simplifies complex administrative tasks for as wide a user base as possible. Every aspect of a NAS system can be managed from a Web

## WEB INTERFACE

User Interface. A setup Wizard further simplifies configuration at installation time or later in the setup process. Volume creation, or the setting of permissions on individual shares or performing software updates, can be done without missing a critical step or encountering a silent failure.

Many services have advanced configuration options available from the Web User Interface that is available in advanced menus. The full power of the FreeBSD shell environment is also available just a click away or through SSH. Ultimately the NAS deployment is easier than ever but doesn't get between you and the solution you need.

## REMOTE ACCESS

One of the best things about owning a CommStor NAS is the ability to collaborate, share and access files from anywhere on the go from both your laptops and your smartphones. Our customers have the ability to access the NAS remotely through popular SFTP applications like winscp and turbo client. The remote access feature keeps you connected to your files with enhanced security. All files that are transferred remotely are done so as encrypted files and only the user with the corresponding ssh key will be able to decrypt and view the contents of the files.

