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A TG Review of NASLite
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There must be untold thousands of old computers that have been retired and now have no gainful employment. To put them back in the "network" force, the clever wizards at ServerElements have put together what they call "NASLite", a network attached storage server operating system.

NASLite transforms a very basic computer into a dedicated SMB, NFS, or FTP file server for the home or small office. It provides anonymous read-write access to any and all files stored on it but does NOT support file permissions, user management, or quotas.

The minimum hardware requirements are modest: a 486DX processor, PCI bus, 16MB RAM, up to 4 IDE HDDs, PCI or onboard NIC, 3.5" floppy drive. The recommended machine has a 200MHz Pentium with 64MB RAM.

The NASLite operating system (which is a Linux variant) boots from a 1.72MB floppy disk, available for a fee from the ServerElements web site, or you can create your own using another Linux OS (including SME/E-smith). There are a number of versions available. This review covers the basic (not gigabit ethernet) SMB and NFS versions.

To create the boot disk, download the appropriate gzipped image and follow the directions on the the ServerElements web site.

```
gunzip NASLite-XXX.img.gz
fdformat /dev/fd0u1722
dd if=NASLite-XXX.img of=/dev/fd0u1722
```

Alternatively, you can also grab one of my scripts from my TechGeeks contrib space:

```
# wget http://www.tech-geeks.org/contrib/mdrone/naslite-smb-fdd.sh
# wget http://www.tech-geeks.org/contrib/mdrone/naslite-nfs-fdd.sh
# wget http://www.tech-geeks.org/contrib/mdrone/naslite-ftp-fdd.sh
```

The scripts must be chmod 755 and must be run from the console with a floppy diskette in the diskette drive. Running one of the scripts will automate the process of downloading the zipped image file, unzipping the file, formatting the diskette, and copying the image to the floppy. When the disk is created, be sure to label it as SMB or NFS. It should NOT be write-protected, as the initial server configuration needs to be saved to the diskette.

To get started, find a computer that wants to go back to work and set the BIOS to boot from the floppy drive. You can install up to 4 hard disk drives on the two IDE channels. Since I didn't have any large HDDs available, I installed a couple of modest ones on IDE-0 in a master-slave arrangement. My test machine is a 133MHz P-1 with 64MB RAM.

Booting the server with the floppy diskette in place takes a little time but eventually the screen greets you with a login prompt. The default login:password combination is "admin:nas". This can be changed from the server's text-based menu:

NASLite-XXX Administration Utility

OPTIONS MENU

- 1 - Change Network Settings - (192.168.1.1 / 255.255.255.0)
 - 2 - Change Name - (NASLite-XXX)
 - 3 - Change Workgroup - (WORKGROUP) -or- Not Used
 - 4 - Configure Storage Disks
 - 5 - Change Password
 - 6 - Change Date and Time - (Day Date Year)
 - 7 - Reboot
 - 8 - Shutdown
 - 9 - Save Configuration

 - C - Make NASLite Floppy
 - E - Exit
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Select: >

There are 3 steps needed to get started:

- 1) Configure the Network Settings
- 2) Configure the Disk(s)
- 3) Apply the Configuration

Configuring the Network Settings involves setting the IP address and subnet mask for the server, as well as the "hostname" and Windows Workgroup (on the NASLite-SMB system).

Configuring the disk(s) involves formatting each drive individually, with the option of scanning the disk(s) for bad blocks.

Once the configuration has been saved and the server has been rebooted, SMB or NFS file services will be available to all computers in the same subnet.

The drives are identified as "Disk-1", "Disk-2", etc. The names are fixed and cannot be changed. On the SMB server, these can be located by browsing the Network Neighborhood, or they can be accessed and mapped using standard UNC addressing (e.g., \\192.168.1.1\Disk-1). On an NSF system (Unix or Linux), the drives will have to be mounted (e.g. mount 192.168.1.1:/export/Disk-1 /mnt/NASDrive-1). Consult your system documentation about adding entries to the filesystem table (/etc/fstab) and creating the mount point on your system. The NASLite manual mentions connections from MacOS X via the "Connect to Server" window.

A convenient feature of the NASLite system is web-based file access. The NASLite server includes a compact web server that not only allows access to all files stored on the drive(s), but continuously updates an "info" area so that the system can be monitored remotely.

Speaking of remote access, a system administrator can also telnet into the server to access the console menu. Neither the web server nor the telnet server is available outside of the subnet. (I only checked my test

system on a 255.255.255.0 subnet, where it was available to all clients. I also asked some fellow geeks to try to access it from their networks and the results were negative)

One of the more curious features of NASLite is its use of "beep-codes" to alert the administrator that 1)the server is online and ready to use, 2) the server is shutting down, 3) the network is not available, and 4) the disks fail SMART self-assessment (if the disks are S.M.A.R.T.).

If the HDD is not S.M.A.R.T. compatible, the server will check it anyway (every 5 minutes) and will sing a special "beep" song letting you know that your HDD is still not S.M.A.R.T. compatible. According to the NASLite support forum, the solution to the annoying reminder that your HDD is not S.M.A.R.T. compatible is to "unplug the PC speaker".

Certainly, this product lacks the sophistication of conventional file servers and NAS devices. What it lacks in features, it makes up for in simplicity. Coupled with a client backup software package, NASLite makes old hardware useful again.

I used Cobian Backup 6 to test the NASLite-SMB system against my WindowsXP laptop. Although I haven't gotten around to it yet, a simple backup script would be easy to write for my Xandros box or any of my SME/E-smith servers. Using CB6 to backup my Win32 servers is a no-brainer.

Besides sporting a newly designed interface, CB6 is a "set-and-forget" utility with some convenient reporting features, including email notification of successful or error-ridden backups. In my opinion, Cobian Backup 6 is one of the "Top 20" utilities in the zero to 10,000MD price range. If for no other reason, it can be scheduled to kick in at 5:00 p.m., which serves as an alarm for me to quit working and head for home, and then it will shut down my computer for me after it completes the full or incremental backup.

For more information on NASLite, the ServerElements team provides a superb set of manuals. For a more in-depth look at these most interesting free products, visit:

<http://www.serverelements.com>

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