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Network attached storage for less than $250?

Anybody who has more than one computer on a home network knows that the probability of a file's being on another computer increases when the other computer is turned off. You might think that the ideal solution would be a file server, but that requires buying another computer and finding space for the computer and its peripherals – keyboard, monitor, and mouse.

Network attached storage (NAS) would be a more elegant solution, but NAS has been an expensive solution – $600 or more for a basic drive.

Recently the UPS driver handed me a package from ADS, a company that occasionally sends things for me to take a look at in my role as technology reporter. The box said it contained an NAS Drive Kit.

Kit? That means that you don't receive a disk drive in the box. Instead, you provide one on your own. The NAS Drive Kit is simply a box that holds the disk drive you choose – a box that includes an RJ45 Ethernet cable connection. It's about 5 inches tall, 2 inches wide, and 9 inches deep and retails for about $130. This is NAS that fits both small spaces and small budgets.

No hard drive is guaranteed to work forever, or even for 30 days, but I prefer Seagate drives because they've given me good service. For $100 I got a 200GB 7200 rpm Seagate hard drive with a 5-year warranty from NewEgg. With the shipping ($2.75 from Edison, New Jersey), the total retail price was still less than $250. That's 1.25¢ per megabyte compared to the $75 per megabyte I paid for the first hard drive I bought in the 1980s, a price drop of 99.983%.

RAID? Not at this price.

The ADS unit has a single drive, so there's no redundant array of independent disks (RAID) involved. RAID can provide additional capacity and, depending on the RAID level, the ability to replace a failed drive without losing any data. If you need RAID, this is not the unit for you. But if you're looking for basic network storage, it's quite a bargain.

Snap makes a NAS device for about $600 – a single 250GB drive in a case with an Ethernet connector. That's 25% more storage, but its cost is more than double that of the NAS kit

and the drive. Snap also makes a 500GB NAS device with 2 drives for $1300.

The ADS device is the clear winner on price. It will work with Windows operating systems as well as Unix, Linux, and Mac but you'll need at least one Windows computer to run the setup application. Once you've configured the drive, it will be accessible to all computers on the network so everyone can copy files that need to be backed up to the NAS drive.

More than 1 terabyte of storage

I still have trouble contemplating the amount of disk space available to me at home. My first ($1600) computer had no hard drive – just two 360KB floppy disk drives. Later, I added a 16MB hard drive for about $1200.

To write this article, I'm sitting in front of a 3-year-old computer with 2 120GB Seagate serial ATA drives (C and D) and 2 additional Seagate USB drives (M and N) that are nominally 200GB and 160GB. The NAS Drive Kit's 200GB EIDE drive and Kaydee's Mac with a 200GB shared drive and an 80GB drive that could be shared pushes the total available disk space in my house to slightly more than 1 terabyte. That's probably more storage than existed in the entire world in 1980. It's also 67,500 times the space available on my first hard drive.

The set-up is surprisingly easy.

Most people will install a hard drive, connect the ADS NAS Drive Kit to a router or hub, turn on the power, run the setup application, and have immediate access to the new storage. For me, it was a bit more difficult because I have a router/firewall that has a minor incompatibility with the NAS device. ADS was able to provide the information I needed to resolve the problem and the network storage

immediately showed up on my desktop computer, on my notebook computer, and on the Macs.

Advanced users may want to set up users and assign permissions, but that's not necessary. If you want to share the entire drive and allow all users to read and write all files on the drive, the installation is complete. ß

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Preparing to fight the previous war

That's what's said of the military – that they're always studying the previous war and that they'll be caught unaware by the realities of the next war. I don't know how true that is for the military, but that's a problem that stalks computer users.

Most of the websites I'm responsible for disappeared late in August. I found out about it on a Monday at 6am when I tried to collect my overnight e-mail. The e-mail application made 2 sounds that told me it couldn't connect to the account. The office had experienced off-and-on connectivity problems on Friday, so I thought maybe we had a continuation of that. My website wasn't reachable, so I tried the *New York Times* website, It popped up, so it wasn't a connectivity problem on my end. I tried 3 websites belonging to clients. Nothing.

I fired off a quick note to the Greg Moore, operator of Akashik.net, the company that provides site hosting for me and most of my clients. He's in Seattle, where it was 3am. The servers are in Florida. About 5 minutes later, a message from Greg said the data center had suffered a major disk failure, but that a technician had already replaced the drive and had started restoring data. He was unwilling to give an ETA, but my instincts told me it would be noon before the system was back. In some ways, I was right.

By about noon, the directory structures of most of my clients' websites were back. Mine weren't. By mid afternoon, all but one was back and e-mail was working. Except mine. Greg let me know that there had been a problem with the restore, but that they hoped to have everything taken care of yet that day. The problem affected only clients with user names T and lower in the alphabet. Mine begins with a W.

The solution involved restoring my sites from the local copies. Everything that's on the site is on my desktop machine and a second copy is on a backup drive, so my sites returned Tuesday evening. I had to recreate e-mail accounts on my site and "forwarding" accounts on all client websites. I can think of more productive ways to spend a few hours, but the process wasn't excruciatingly painful.

Once again I was impressed by Greg's honesty throughout the process. He's unhappy about losing data for clients and will probably institute additional procedures to avoid this problem. But there will always be some *other* problem out there waiting to show us what it can do.

If they provide nothing else, incidents such as this are clear reminders of the importance of having your own important files backed up, even if you think somebody else is taking care of the backup for you. ß

Minor notes

The (former) AOL employee who stole 92,000,000 names is going to prison: Jason Smathers, who used to work for AOL, will spend up to 15 months in prison for stealing a database of 92 million e-mail addresses and selling it to spammers.

AOL fired Smathers in 2004 after determining that he was the person who used another employee's ID to steal the names. He sold the 92,000,000 names for $28,000 (that's about 0.03 cents per name – three hundredths of a cent) and spammers have already delivered about 7 billion spams (that's about 76 spams per address if I got the decimals aligned properly).

A lawyer for Smathers characterized the theft as "dumb", "stupid", and "insane". Smathers at least did not attempt to slide by with an insanity plea.

In case you're wondering, the sentence works out to 1 second of prison time for every 142 stolen e-mail addresses.

Mozilla creates for-profit division just as Firefox loses market share: Net Applications, which monitors some 40,000 websites, says that Firefox's market share has dropped a bit. Earlier in the year, Firefox was gaining about 1% per month and Microsoft's Internet Explorer was losing about an equivalent amount.

In June, Firefox hit 8.71%, but fell to 8.07% in July. Internet Explorer advanced to 87.2% in July from 86.56% during June. That's still significantly lower than the 95% or more that IE had commanded previously. The biggest gainer was Safari on the Mac – increasing its market share to 2.13%.

According to Net Applications, the shares work out this way:

Internet Explorer	87.20%
Firefox	8.07%
Safari	2.13%
Netscape	1.50%
Opera	0.49%
Mozilla	0.52%
Other	0.09%

The great VoIP outage is coming: Voice over IP users may find themselves without service around the end of September. The Federal Communications Commission wants people who use VoIP to acknowledge the service's problem with 911 calls.

If you have VoIP, you probably don't have 911 service. The FCC requires users to acknowledge that fact and the commission is concerned about those who haven't acknowledged the warning.

To express their concern, the FCC will mandate that VoIP service for those who haven't acknowledged the warning be turned off. How this will help people communicate in an emergency isn't exactly clear. ß

CORNER on the market by A.J. Stinnett

*"The mission of a manager is to do the right things.
A manager becomes a leader by doing the right things repeatedly."*