

By Louis Nel

If you're responsible for a network, you've probably seen Moore's Law' marching relentlessly on your servers. Today's cutting-edge server can be tomorrow's entry-level home PC.

To run with the pack in terms of performance, productivity, and competition, servers that are long in the tooth have to be put out to pasture regularly. But there might be (and usually is) some life left in these early retirees, and they can still be put to good use. Often, you can give old servers a new lease on life by upgrading to a bigger hard drive and adding RAM. The nature of your network will dictate what's best for you, but here are some ways you might get additional mileage from an old server.

1 Turn it into a patch management server

Patch management is the bane of the network admin's life. In a Microsoft network environment, everything—from PowerPoint to Windows Server 2003—needs to be regularly patched for vulnerabilities. Setting all clients (I'm not even mentioning servers) to auto-update is not the wisest decision. Apart from being a waste of bandwidth (so many clients going out on the Net to download the same patches), you might (rightly) not like the idea of surrendering control over what needs to be patched and when to some automated process. You need a centrally managed system.

If you're a small to midsize enterprise, you might find the cost of commercial offerings to be too high. A reasonably good—and free—alternative, is Microsoft's Windows Server Update Services (WSUS). You'll find a step-by-step guide to installing, configuring, and using WSUS [here](#). According to the guide, the hardware recommendations for a server with up to 500 clients are a 1 GHz processor and 1 GB RAM.

2 Create a NAS server for backups

Backups are the other bane (pain!) of the network admin's life. Here, also, that old server can provide relief.

Thanks to some great software available at a very reasonable price, you can quickly and painlessly turn an old server into a network-attached storage (NAS) device. Apart from the software, NASLite-2 CDD, you'll probably just need to add some big drives to turn your old server into a monster backup server. You'll find the software and more info [here](#).

NASLite-2 CDD is bootable from CD as well as USB. As you'll read on the site, "NASLite-2... is optimized to perform at maximum efficiency with minimum of hardware requirements." It boots directly into RAM and runs on a mere 8 MB RAM disk. Basic requirements are a Pentium processor and 64 MB or more of RAM.

3 Use it for disk imaging

Having up-to-date disk clones (ghost images) of critical machines (and even noncritical ones—e.g., in environments where you have many machines with the same hardware and software) can really save your bacon—and save you time. Finding storage space for these big images is another matter, though. But an old server might do nicely, even if you can't afford the luxury of buying software to re-image network clients from a central server. You can add some big drives to the old server to merely use its capacity to save all the images, which you can then use to re-image from a client (e.g., just copy the image to a removable drive and restore the image from there).

4 Put it to work as a firewall

In need of a firewall? If writing Cisco access control lists isn't your forte, and your budget doesn't allow for a hardware or commercial software firewall, consider [SmoothWall](#). This is a refined open-source firewall that will give many commercial apps a run for their money.

According to the site, "SmoothWall includes a hardened subset of the GNU/Linux operating system, so there is no separate OS to install. Designed for ease of use, SmoothWall is configured via a Web-based GUI and requires absolutely no knowledge of Linux to install or use."

5 Make it a test server

Why not use that old server for testing purposes? In a lab/test environment, you don't need top specs. (In fact, testing with minimum specs might be the point of the exercise and could be a good indicator of expected performance.) If need be, just throw in some extra RAM. You can use such a machine for testing new applications and new server offerings or even to practice your "alternative" operating system administration skills by installing Linux, UNIX, or FreeBSD.

Another good idea is to install virtual PC/server software on such a PC. With the competition between Microsoft and VMware heating up, expensive versions of these virtual machines are now available for free. You can get Microsoft's Virtual PC 2004 and Virtual PC 2007 (with support for Vista) [here](#). Virtual PC 2007 was in beta at the time of writing. Microsoft Virtual Server 2005 R2 is also available as a [free download](#). VMware's server offering is available [here](#).

6 Turn it into a file/print server

If you have a small department with its own needs, an old server can come in handy as a dedicated file/print server, easing the burden on your main file/print server(s). Installing a file server is simple enough. For more on Windows Server 2003 Print Services, see [this article](#).

7 Create a terminal server

If ever you wanted to try out the capabilities of Terminal Server services (especially the application server features), that old server could be just what you need. Just remember to put in lots of RAM. For a technical overview of Windows Server 2003 Terminal Services, download this [Microsoft document](#).

If you like what you find, check out Deb Shinder's article ["Create a scalable thin client solution with Terminal Server farms"](#) for even more inspiration.

8 Use it as a DHCP server

In the article ["Create a superscope to solve the problem of dwindling IP addresses."](#) I wrote about the problem of running out of IP addresses and explained how introducing superscopes could solve the problem. An extra DHCP server to help dish out addresses on another subnet can sometimes come in very handy in this situation.

9 Make it a mail /SMTP server

So the big boss listened to the Linux guys and dumped Exchange Server. But now he and the rest of management want all the Exchange features and guess what? No can do. But maybe an open source product (there's also a network edition) called [Zimbra](#) is the answer. I haven't tested it, but it looks like a real contender, particularly for midsize and smaller companies. Try it on that server you're using for testing! For more information, go to <http://www.zimbra.com/community/documentation.html>. The requirements for evaluation and testing are an Intel/AMD 32-bit CPU 1.5 GHz, 1 GB RAM, and 5 GB free disk space for software and logs, as well as additional disk space for mail storage.

10 Convert it to a monitoring server

Call me superstitious, but I like to keep my servers clean and pristine and dedicated to their primary roles. So yes, as a WAN manager I need software to sniff and ping and enumerate resources and to scan and inform me about the state of my network. But no, I'm loathe to install such software on my domain controller or other server performing some dedicated role. That's why I used the first old server to be retired for this noble task.

I gave the job to [Spiceworks IT Desktop](#). (You can read Justin James' review [here](#).) IT Desktop is a free, easy-to-use browser-based solution. You can believe the site when it says that the product takes less than five minutes to get up and running. It's designed for organizations with fewer than 250 devices on their network. System requirements are Windows XP Pro SP2 or Windows 2003 Server; a 700 MHz Pentium class processor; and 512 MB RAM.

You could also put [The Dude](#) to work. It does a great job of mapping your network and can be used for pinging, port probes, and outage notifications.

Some of your retired servers may not make the grade. But if you keep in mind these possible uses, I'm sure most of them will be able to perform some of these roles, thus giving new life to a potential doorstop.

Additional resources

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- "[Windows Server 2003 Base Installation Flowchart](#)" (TechRepublic download)
- "[Computer hardware inventory list](#)" (TechRepublic download)
- "[10 things you should know about saving money on computer hardware](#)" (TechRepublic download)

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