

# Biztech™

ARTICLE REPRINT

INFORMATION TECHNOLOGY SOLUTIONS TO GROW YOUR BUSINESS

## MORE THAN FILE AND PRINT



Phil Leiter takes the HP ProLiant ML115 small-business server for a test drive.

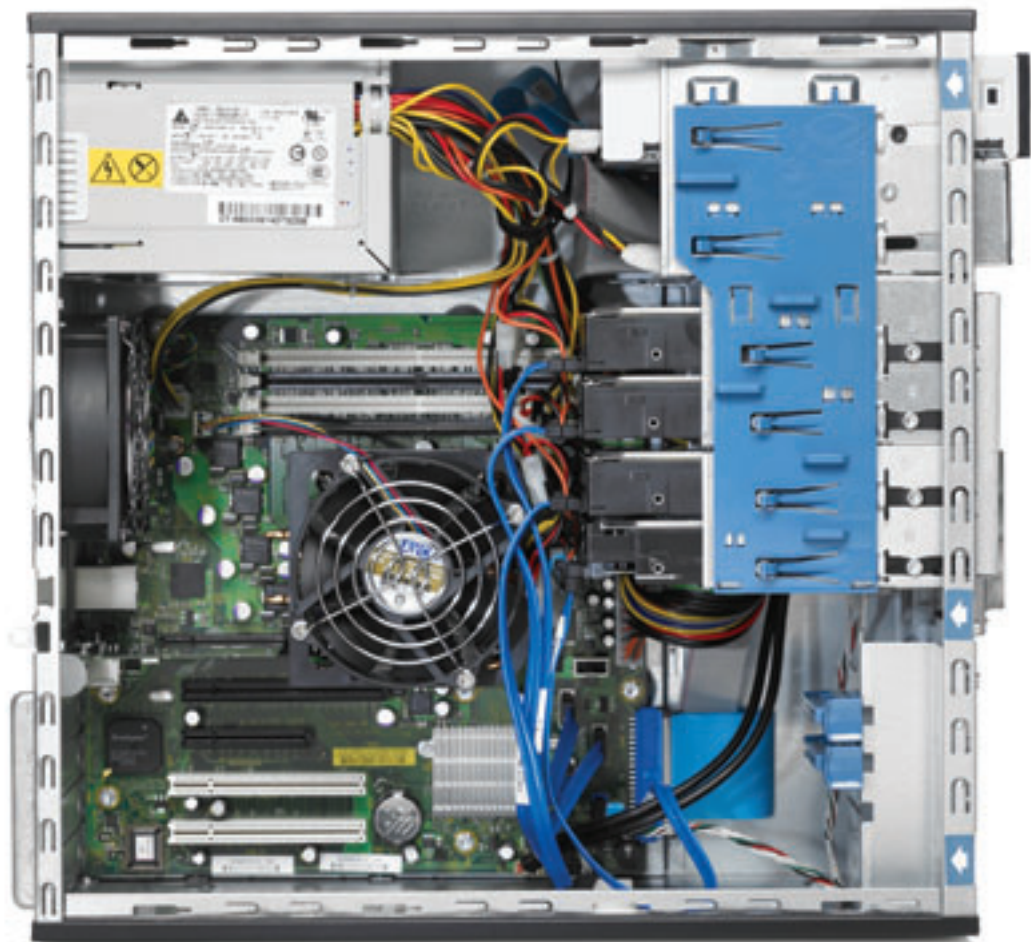
# More than File and Print

The ML115 is an ideal entry-level server for small business.

Small businesses typically share information and resources among desktops, or perhaps designate a particular desktop as a server. This approach may save money at first, but the costs in performance, security and management quickly add up as the business grows. The idea of an entry-level server can make everyone in a small business nervous: The owner worries about the cost, the users worry about the complexity and the technology manager worries about inadequate performance and rapid obsolescence.

HP offers an answer to all these concerns by packaging its latest entry-level server, the ProLiant ML115, with Microsoft Windows Small Business Server (SBS) 2003 R2 Standard Edition. Called “Smart Buy,” this combination brings true server performance to file and print services, and adds applications and management tools that bring immediate productivity gains for users and technology managers.

Based on an AMD Opteron dual-core processor, the ProLiant ML115 is designed to run out of the box and grow with your business. The Smart Buy version of the ML115 server is configured with a single Seagate Barracuda 160 gigabyte SATA hard drive and 1GB of ECC RAM. The cleanly designed, quiet and well-ventilated case can be configured with up to 8GB of RAM and four non-hot-swap Serial ATA drives (up to 2 terabytes), which can be configured in RAID 0, 1, 5 or 0+1 array through the onboard NVIDIA nForce 590 platform. Six external USB ports provide plenty of connectivity, with two internal USB ports for optional tape backup and floppy drives. The onboard display and gigabit network adapters leave the 2 PCI-32 and 2 PCI-Express expansion slots open.



### Look Ma, No CDs!

HP’s pre-installation of Windows SBS 2003 R2 made this one of the easiest sever setups and by far the fastest I’ve ever experienced. Once I determined the system partition size, the SBS setup wizard led me through a series of surprisingly brief steps that included the company name, domain name and some network-related questions. Within 20 minutes, the server was up and running with the Active Directory domain configured, DNS,



### TIP #1: Do I need an additional Uninterruptible Power Supply?

The ML115 does not offer a redundant power supply option, which is critical for your server infrastructure. As such, a UPS unit is strongly recommended.

HP has tested and supports the optional HP T750 or T1000 UPS units for use with the ML115, though one could also use any Microsoft supported UPS with Windows SBS.



### HP ML115 SMART BUY SERVER

DHCP and Exchange running, and a “To Do” list — part of the larger Server Management console — on the screen and ready for more detailed configuration.

The HP ML115 is a very capable file and print server, handling gigabytes of data transfers and open files with ease. Having a server that’s fast and available at all times for file access and sharing makes things less complex for end users. Simply, this server as configured could handle more than 100 users. Windows SBS limits the number of users working on the server, but adds many tools that simplify their work and boost their productivity.

Exchange 2003 SP2 is ready to go after the server setup. You need only to include a mailbox with each user’s account and they can work with the greatly improved Outlook Web Access (OWA) or, if you prefer,

the Outlook 2003 client application, which is included with Windows SBS.

Users may also send and receive faxes through the server, which is as simple to set up as a network printer.

Windows SBS configures a SharePoint internal Web site and, once you’ve personalized it for your company, this provides users with an easy way to share information. I’ve never looked at SharePoint until now, and the default configuration allowed my test clients to get right to work sharing files, posting announcements and scheduling projects. SharePoint also makes it easy to find and install approved applications stored on the server.

### End-User Advantages

The tools that may have the most noticeable impact for end users are related to remote access. Authorized end users can be configured for secured remote access to the network, whether through OWA or through a virtual private network to other network resources, including their own computers. ActiveSync is included for support of Windows mobile devices.

With all these end-user advantages, it may sound as if Windows SBS 2003 R2 adds to the technology manager’s workload. In fact, it simply takes all the things your company is probably doing already —

### ML115 SMART BUY CONFIGURATION

- SBS and 1GB of RAM
- Scales to 8GB RAM
- Supports over 75 end users
- Pre-configured for easy setup — no CDs to mess with

file sharing, e-mail, scheduling projects, printer and fax sharing — and centralizes them. This allows easier and more effective management, greater security and reliability, long-term lowered costs and more efficient use of the information technology team’s time.

### Why It Works for IT

When you have gone through as many server installs as I have, you can’t help but be a little leery of a 15-minute server setup that asks few questions yet includes Active Directory, Exchange, DNS and DHCP. Yet, I was pleased (and somewhat surprised) to see that the Windows SBS 2003 setup created a well-secured network. For example, based on the company name I supplied, “TESTGROUP,” the Active Directory namespace was set as TESTGROUP.LOCAL, which helped secure the internal network.

Once you have gone through the initial setup, you will have to run the included update to bring Windows SBS 2003 up to R2. Then like any Windows server, you will have to run additional updates to get the operating system and applications current, though this is somewhat easier with SBS Update Services.

The Server Management console in Windows SBS 2003 R2 provides a series of wizards that simplify most of the usual network management tasks. Back to the “To Do” list that I mentioned earlier, everything you would first want to do once the server fires up is right on the list:

- set up the Internet connections
- add users, computers, printers and fax lines
- configure remote access and backup
- add licenses or set up monitoring.

Each item on the list opens a wizard. These wizards, all part of the integrated Server Management console, guide the technology manager through the steps necessary to complete each task and provide additional information about the steps.

The Server Management console is divided into two main groups — Standard Management and Advanced Management. Standard Management includes the simplified tools of SBS that monitor and manage common IT tasks. Two of these tools — Backup and Update Services — really stand out.

The Backup application works with Volume Shadow Copy, which allows you to retrieve previous versions of files and to back up open files. This allows reliable online backups of Exchange and Web site data. The Backup application works with tape drives, folders or external disks. The Update Services is a simplified version of Windows Server Update Services, which allows you to control and monitor the updates to all the computers on your network. The Monitoring and Reporting wizard indicates which updates need to be reviewed and installed, and reports any important events that require your attention. Green checkmarks quickly let you know that things are good, or tell you what needs to be done to get those checkmarks. I found that the Standard Management tools are easy — and, dare I say, fun — to use.

### IT Management Overhead

Of course, ease of use is not necessarily the best criterion for server management. The Advanced Management section includes additional console snap-ins that are more like the traditional Microsoft Management Consoles for more detailed control of server applications and services.



### TIP #2: Do I have enough power?

To more fully utilize the power of the Opteron processor, increase the system RAM to 2GB. Add three hard drives to create a RAID 0+1 or RAID 5 array for greater performance and redundancy.

In fact, if you prefer, you can bring up any of the MMCs that you may already be familiar with in Windows Server 2003, including the Exchange System Manager. I expected that SBS would provide less functionality than Windows Server 2003, or that certainly Exchange or SharePoint would be significantly restricted. Instead, SBS retains all the power of the operating system and these applications, and adds simplified tools to ease network management tasks. The only apparent restriction is on the number of users it supports, though at 75 users that's still a healthy number for a small business.

The Windows SBS 2003 server sets up quickly, the pre-configuration of key settings are well thought out, and its management tools are simple and intuitive. Now, I wanted to see what the HP ML115 could handle as configured. I used the Exchange Server Load Simulator (LoadSim2003), which validates Exchange and server configurations and simulates user activity. I created 50 Outlook users with 100-plus megabyte mailboxes, which took less than 30 minutes to complete, and then set all 50 to work in Load-Sim2003's default "Heavy User" mode.

Based on Exchange best practices, this is a much bigger load than the server hardware should be expected to handle, but except for some spikes in latency, the server ran through the simulation with no notable problems. Increasing the Exchange load and adding 5GB of data transfers did create bottlenecks at the hard drive and network card, as expected, but still resulted in only one error out of thousands of transactions. With additional RAM and hard drives, the ML115 could certainly manage 75 SBS users.

There's no question that if you're going to run Exchange, then you will want to take advantage of the hardware



### **TIP #3:** **Are there any pre-loaded wizards worth noting?**

One wizard helps the administrator relocate the My Documents folders from end users' desktop hard drives to a network folder, and move existing documents to that folder. Another wizard helps the administrator assign applications to be installed on client computers.

## **HP PROLIANT ML115**

- **Processor:**  
AMD Dual-Core  
Opteron 1214  
(2.2Ghz)
- **Cache memory:**  
2MB (2x1MB)  
L2 cache installed
- **Power:**  
50/60-Hz  
AC 120/230 V  
370 Watts  
power supply



configuration options of the HP ML115 Smart Buy server. To more fully utilize the power of the Opteron processor, increase the system RAM to 2GB. Add three hard drives to create a RAID 0+1 or RAID 5 array for greater performance and redundancy.

The server ran through continued but more reasonable Exchange load simulations for a week. During that time, it also provided daily reports on the server's condition and updates on the status of the network computers, and ran various maintenance tasks. Even under load, the server was so quiet that it would be barely noticeable on an office desk. A few minutes a day were all that was needed to check on things.

Although setting up the domain and Exchange through Windows SBS 2003 was remarkably easy, if you have not performed either of these functions before, then you will probably want someone with experience to review and modify the installation. I made several changes within Windows Server and Exchange that improved performance over the default. Again, these are not scaled-down versions of Windows Server or Exchange 2003, so it's a good idea to be familiar with these technologies. You will also want to ensure that network file and application permissions are set to match your security model.

There are a couple of notable restrictions within Windows SBS beyond the

75 end-user limit. The Windows SBS server must be the root of an Active Directory forest, and domain trusts are not allowed. Further, the Exchange application cannot be part of a larger Exchange organization. Therefore, these two limitations make Windows SBS server unsuitable to run a remote office within a larger existing domain.

However, within the SBS domain, you can add another domain controller, so you do have the option of redundancy or a remote office. You can

install another server to run Exchange — you would have to buy a separate Exchange server license, but the client licenses are valid. If your business grows beyond 75 end users, Microsoft offers a Transition Pack that removes the limitations of SBS, though it also removes those nifty SBS management tools. For a small business, these seem to be reasonable limitations that simply reduce the complexities of a full server environment, while allowing for the transition to such an environment.

The HP ProLiant ML115 Smart Buy makes the establishment and maintenance of a small network domain about as easy as I could have imagined, and any technology manager of a small business workgroup will immediately appreciate the improved performance and centralized management of this package. Users will enjoy better performance and less time taken away for maintenance. Small business owners will appreciate the low price point of the ML115, even if you add many of the additional options, as well as the increased security and reliability of business information. All told, the HP ProLiant ML115 Smart Buy is a big win for small business. **[BT]**

*Phil Leiter is the IT manager for Cumberland Associates LLC, a private investment advisory firm based in New York. An avid PC gamer, he enjoys building custom high-end desktop computers.*