Ultra-Slim Server Hardware

You can’t escape it: Thin is in everywhere— including server hardware. At least using slim server hardware doesn’t require the pain of dieting and strenuous exercise. All you have to do is check out the following vendors’ server hardware and select the hardware best suited for your company’s environment. Now that server vendors are boasting servers with a 1U form factor, you may finally be able to purchase all of the servers your company needs and fit those servers into your company’s existing network room. (This article provides a first look at products. Novell Connection has not tested these products and does not list all of the products’ features. For more information about the products, visit each vendor’s web site.)

IBM XSERIES 330

Sporting a 1U rack-mountable footprint, which is just 1.75 inches high, the IBM XSERIES 330 gives new meaning to the term thin server. Because the xSeries 330 has been optimized for a rack environment, you can fit 42 of these servers on one standard rack. You can then use IBM’s console chaining technology to daisy chain these servers together.

This new chaining technology eliminates the confusing mass of wires lurking behind traditional rack-mounted servers. With the console chaining technology, one digital cable connects all the xSeries 330 servers on one rack, replacing dozens of cables and hundreds of connectors per rack.

You can customize the xSeries 330 to meet the needs of your company’s particular environment. The xSeries 330 includes the following features and options:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPU</strong></td>
<td>Pentium III 800 MHz, Pentium III 866 MHz, Pentium III 933 MHz, or Pentium III 1 GHz</td>
</tr>
<tr>
<td><strong>Number of CPU s</strong></td>
<td>Up to 2</td>
</tr>
<tr>
<td><strong>Level 2 Cache</strong></td>
<td>256 KB</td>
</tr>
<tr>
<td><strong>Bus Type</strong></td>
<td>PCI</td>
</tr>
<tr>
<td><strong>RAM</strong></td>
<td>256 MB standard, 4 GB maximum</td>
</tr>
<tr>
<td><strong>RAM Slots</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>RAM Type</strong></td>
<td>SDRAM Memory Error Correcting Code (ECC) RDIMM</td>
</tr>
<tr>
<td><strong>Maximum Internal Storage</strong></td>
<td>72.8 GB</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>2 64-bit PCI slots</td>
</tr>
<tr>
<td><strong>Network</strong></td>
<td>Integrated 10/100 Ethernet</td>
</tr>
<tr>
<td><strong>RAID Support</strong></td>
<td>Optional</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>200 watts</td>
</tr>
<tr>
<td><strong>Warranty</strong></td>
<td>3 year limited onsite</td>
</tr>
<tr>
<td><strong>Hot-Pluggable Components</strong></td>
<td>Hot-pluggable hard drives</td>
</tr>
<tr>
<td><strong>Operating Systems Supported</strong></td>
<td>NetWare 5.1, Windows 2000, Windows NT, SCO UnixWare, Citrix Winframe, Linux</td>
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</tbody>
</table>

The xSeries 330 also includes IBM’s Lightpath Diagnostics System, which uses an LED panel inside the server to identify failed components. Each component has a matching LED. You simply open the cover of the server and press a button to activate the LightPath system, which displays a pointer to the failed component.

The LightPath Diagnostics System holds data up to 12 hours. If you unplug the server, the LightPath Diagnostics System remembers the most recent fault. Also, the system can illuminate the path to the failed component while the server is disconnected from the power supply.

In addition to supporting the most popular operating systems available today, the XSERIES 330 supports both NetWare Cluster Services for NetWare 5 and Novell Internet Caching System (ICS). As a result, you can use this software in combination with several xSeries 330 servers to build a cluster solution or to accelerate your company’s web site. For more information about adding Novell Cluster Services to an xSeries 330 server, visit www.ibm.com/pc/us/netfinity/ics.html. For more information about NetWare Cluster Services for NetWare 5, see "Uptime in Real Time With NetWare Cluster Services for NetWare 5," Novell Connection, Sept. 99, pp. 6–18. For more information about Novell ICS, see “Cache In on the Web With Novell ICS Appliances,” Novell Connection, Apr. 2000, pp. 6–19. You can download both of these articles from www.ncmag.com/past.

In fact, NetWare Cluster Services for NetWare 5 has been tested through IBM’s ClusterProven program. This program is designed to validate end-to-end clustering solutions, eliminating the guesswork of putting together a compatible clustering solution. For more information about IBM’s ClusterProven program, visit www.ibm.com/pc/ww/eserver/xseries/clustering/clusterproven.html.

For more information about the xSeries 330, visit IBM’s web site at www.ibm.com/pc/us/eserver/xseries. You can also call 1-800-IBM-4YOU.

COMPAQ PROLIANT DL360

Like the xSeries 330, the ultra-thin Compaq ProLiant DL360 has a 1U rack-mountable footprint and is optimized for the rack environment. Consequently, you can fit 42 ProLiant DL360 servers on one standard rack.

The ProLiant DL360 includes the following features and options:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPU</strong></td>
<td>Pentium III 550 MHz, Pentium III 800 MHz, Pentium III 866 MHz, or Pentium III 933 MHz</td>
</tr>
<tr>
<td><strong>Number of CPU s</strong></td>
<td>1 Pentium III 550 MHz CPU or up to 2 of the other CPU s</td>
</tr>
<tr>
<td><strong>Level 2 Cache</strong></td>
<td>256 KB</td>
</tr>
<tr>
<td><strong>Bus Type</strong></td>
<td>PCI</td>
</tr>
</tbody>
</table>
• **RAM.** 128 MB standard, 4 GB maximum
• **RAM Slots.** 4
• **RAM Type.** SDRAM ECC RDIMM
• **Maximum Internal Storage.** 72.8 GB
• **Expansion Slots.** 2 PCI slots (1 64-bit slot and 1 32-bit slot)
• **Network.** 2 10/100 Ethernet network interface boards that support Wake On LAN (WOL)
• **RAID Support.** Integrated Smart Array Controller, which provides Redundant Array of Independent Drives (RAID) capability without using a PCI slot
• **Power Supply.** 190 watts
• **Warranty.** 3 year limited
• **Hot-Pluggable Components.** Hot-pluggable hard drives
• **Operating Systems Supported.** NetWare 5.1, Windows 2000, Windows NT, SCO UnixWare, Linux, and Sun Solaris Intel Platform Edition

The ProLiant DL360 ships with Compaq's management software, including the following utilities:

• **The Compaq Insight Manager,** which monitors servers and workstations
• **The Compaq SmartStart,** which enables you to configure servers and integrate software
• **The Array Configuration utility,** which enables you to configure and manage the Integrated Smart Array Controller
• **The Compaq Remote Insight Lights Out Edition utility,** which allows you to manage and configure the server from a remote location

If you planning your company's rack solution, Compaq also provides a Windows-based tool to help you: The Rack Builder Pro can help you plan, configure, and implement a Compaq rack. You can download this tool from www.compaq.com/racks.

Compaq also partners with Novell to create clustering and Internet caching solutions. If you are interested in using NetWare Cluster Services for NetWare 5 to build a clustering solution on Compaq hardware, visit www5.compaq.com/products/quickspecs/Division/10487_div.html. If you would like information about Compaq's caching appliance (which is based on Novell ICS), visit www5.compaq.com/tasksmart/cseries.

For more information about the ProLiant DL360, visit www.compaq.com.

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The ProLiant DL360 ships with Compaq's management software, including the following utilities:

You can also call 1-800-888-0220 or 1-281-370-0670.

**DELL POWEREDGE 1550**

Dell Computer Corp.'s 1U server, the PowerEdge 1550, is due to begin shipping this month. Like the other 1U servers featured in this article, the PowerEdge 1550 is optimized for the rack environment.

The PowerEdge 1550 includes the following features and options:

• **CPU.** Pentium III 866 MHz, Pentium III 933 MHz, or Pentium III 1 GHz
• **Number of CPUs.** Up to 2
• **Level 2 Cache.** 256 KB
• **Bus Type.** PCI
• **RAM.** 128 MB standard, 2 GB maximum (4 GB with 1 GB DIMMs)
• **RAM Slots.** 4
• **RAM Type.** ECC SDRAM
• **Maximum Internal Storage.** 108 GB
• **Expansion Slots.** 2 64-bit slots on separate PCI buses
• **Network.** 2 embedded 10/100 Ethernet network interface boards
• **RAID Support.** Optional
• **Power Supply.** 240 watts
• **Warranty.** 3 year limited
• **Hot-Pluggable Components.** Hot-pluggable hard drives

In addition, the PowerEdge 1550 provides a convenient feature for the rack environment: The server's keyboard, video, and mouse ports are located both in the front and the back of the server's chassis.

Dell also offers an Internet caching appliance in a 1U form factor: The PowerApp.cache is based on Novell ICS and can be easily deployed in any environment. (For more information about the PowerApp.cache, visit www.dell.com/us/en/biz/products/series_cache_servers.htm.)


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Visit the American Red Cross web site at www.redcross.org.