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Chapter 5: Linux

64-bit blade servers nicely complement Linux distributions that help increase IT stability, security and processing power. Get an introduction on why and how to work with Linux on blade servers.



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Linux on blade server basics

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Migrate systems to Linux rack 64-bit blade servers and customers will thank you for the cost savings.

What is a blade server?

A blade server, considered the poor man's supercomputer, is a surprisingly simple server solution made up of a chassis that holds swappable blades, as a bookshelf holds books. Each blade, a standalone server, has a processor, hard drive, operating system, etc. Once the blade is plugged into the chassis, it gets to share power, optical drives, ports and switches—and resources—with all the other blades.

What are the benefits of blades?

64-bit blades start at \$1,500 but they help IT shops save money later by requiring less data center floor space and fewer labor costs because cabling is simpler.

Furthermore, most blades are hot-swappable, they don't require downtime when replaced, and they offer redundancy.

Where are blades best applied?

If your customer needs a powerful Web hosting or clustering solution that is economical and makes use of limited space, then a 64-bit blade cluster is exactly what the doctor ordered.

Why run blades on Linux?

Linux allows companies to save money and increase IT stability, security and power. It's stable because it's a true multiuser, multitasking platform; it's secure because it's immune to viruses; and it's inexpensive because the software can be installed and configured at no cost.

Linux operating systems on blade server: Hardware options

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Currently, IBM, Hewlett-Packard and Dell sell the most servers, in general, and the same goes for blades. But don't disregard blades from smaller vendors, who may be able to help you provide more personal service and customization.

No industry standards for blade servers exist at this time, making it tricky to choose the best hardware. Most likely you'll help your customers choose one vendor to work with, just be sure the vendor offers the price and warranties desired.

Blade servers come at various prices, numbers of blades per unit, warranties, etc. Some will come with a Linux operating system distribution pre-installed.

Choosing a Linux operating system distribution

You and your customers have no shortage of Linux distribution options—but that will also complicate your decision. Consider if you want to offer your own support or use the support provided by the Linux distribution, if available, and if it's free or not.

For instance, Debian and Gentoo are two distributions with no professional support readily available, but do offer robust communities and a few specialists.

Since you're looking for a Linux distribution to run on a blade server, you don't want to pick one that's tailored to desktops. Look for server-specific installations.

SLES 10 and RHEL 4 seem are both optimizing for 64-bit systems and making alliances with HP, IBM and Dell.

Free versions of Red Hat, SUSE or other distributions may work for smaller installations.