

The most manageable

With the release of four next-generation servers, Dell is taking performance



Dell PowerEdge 1850 and 2850

To meet the growing business demands for instant access to ever-increasing amounts of information, Dell introduces the Dell™ PowerEdge™ 1800, 1850, 2800, and 2850 servers. With improved performance, scalability, and management capabilities compared with the previous generation of servers, these new solutions reflect an evolution in server technology—they are the most manageable PowerEdge servers ever.

Intel Xeon processors deliver exceptional performance

This new generation of Dell PowerEdge servers leverages the power of 64-bit Intel® Xeon™ processors to deliver fast data processing and to support more of today's—and tomorrow's—high-performance applications. The new PowerEdge servers also integrate Intel Hyper-Threading Technology capabilities, which allow the operating system (OS) to view one physical processor as two logical processors. Hyper-Threading Technology enables the system to run more tasks simultaneously, accelerating response times.

With processor clock speeds of up to 3.6 GHz, support for two processors per enclosure, an 800 MHz front-side bus, and Hyper-Threading Technology capabilities, these servers can process more data in less time than the previous generation.

Next-generation PowerEdge servers are built to grow with businesses

These next-generation PowerEdge servers are designed with performance features that will help enable easy

growth over time. Intel Extended Memory 64 Technology (EM64T) provides 64-bit computing and large memory addressability¹ while maintaining complete 32-bit compatibility and performance—all in one platform. As a result, you can run existing 32-bit applications with excellent results while gradually migrating to 64-bit applications.

The new PowerEdge servers also allow customers to increase server memory to 8 GB of 400 MHz double data rate 2 (DDR2) SDRAM, with support for 12 GB and 16 GB configurations in the future. Equipped with multiple Peripheral Component Interconnect Extended (PCI-X) and PCI Express slots, these servers also enable customers to access additional functionality by adding PCI devices. The new PCI Express capability can deliver up to 3.8 times the bandwidth of the PCI-X implementation, helping customers expand into the next generation of peripherals.

To ramp up storage capacity, customers can add hot-swappable internal hard disk drives (HDDs) or attach external Dell PowerVault™ SCSI drives, PowerVault tape drives, or Dell/EMC Fibre Channel storage enclosures.

More manageable than ever

The new PowerEdge servers offer significant gains in manageability, helping businesses to operate servers more efficiently and minimize IT labor costs. An embedded baseboard management controller (BMC) that adheres to the Intelligent Platform Management Interface (IPMI) standard monitors critical components and

generates alerts to help administrators detect problems. Customers can also use the Dell Remote Access Controller 4 (DRAC 4)—a remote management solution equipped with a straightforward browser interface that has a remote console through which technicians can perform key management, repair, and upgrade operations.

Built with common BIOS and drivers, these PowerEdge servers let you develop your system image once and deploy it across multiple servers as needed. And when it's time to upgrade, you can cut down the amount of time needed to manage the software components of your system. Common management controllers, hard drives, system board design, and memory upgrades across multiple PowerEdge servers all help to make management a snap.

Servers optimize availability and serviceability

As more businesses enter into markets that demand around-the-clock access to information, ensuring continuous system availability is essential. This new generation of Dell servers is supplied with a host of features to minimize system downtime. Hot-pluggable hard drives and hot-pluggable redundant power and cooling systems (as either optional or standard equipment on these models) can help businesses avoid failures and ensure availability during repairs and upgrades. All models feature tool-less chassis, so technicians can make changes and repairs rapidly in the field.

Which model is right for you?

PowerEdge 1800

The PowerEdge 1800 is an entry-level rack-mountable (5U) tower server that balances performance and affordability. It delivers exceptional performance for file-and-print, e-mail, groupware, shared Internet access, small workgroup applications, database applications, and retail point-of-sale services.

The 1800 has a total of six I/O channels, including PCI Express and PCI-X slots. Internal storage capacity

servers yet

and manageability to a new level

is scalable to six HDDs for up to 1.8 TB of storage. The tower enclosure also permits internal tape support with PowerVault 100T or 110T tape drives. Remote management can be facilitated with an optional DRAC 4/P PCI card.

PowerEdge 1850

The PowerEdge 1850 shares performance attributes with the 1800 but comes in a 1U rack-dense enclosure. The 1850 is optimal for high-performance computing cluster environments, edge-of-network and Internet infrastructure applications, and even thin-client/server-based computing.

The 1850 supports up to five I/O channels, including PCI-X and PCI Express slots, plus dual embedded Gigabit² network interface cards (NICs) and a management port for an optional DRAC 4/I remote management card. Internal storage can include two SCSI drives with up to 600 GB³ of storage.

As the demands of enterprise applications continue to grow, the new Dell PowerEdge 1850 is ready to accept the challenge. In the NetBench network server test, the PowerEdge 1850 truly shines, outperforming the PowerEdge 1750 by achieving:

- A 20 percent performance increase at its peak throughput rate
- Capacity for 22 percent more clients at its peak throughput rate
- A 49 percent throughput advantage at the maximum tested client load⁴

PowerEdge 2800

For businesses that require greater storage capacity or scalability, the PowerEdge 2800 is an excellent match. The 2800 is well suited for processor- and storage-intensive applications, including database, file-and-print, infrastructure, e-mail, and shared Internet access applications. Despite the powerful performance and capacity, the server's manageability and serviceability



Dell PowerEdge 1800 and 2800

features help to drive down operational costs, whether the server is around the corner or across the globe.

The server's storage capacity is impressive. In its rack-mountable (5U) tower enclosure, the 2800 accommodates up to 10 hot-pluggable HDDs for up to 3 TB of total storage. It also provides a total of seven I/O channels, including hot-pluggable PCI Express and PCI-X slots. The 2800 employs dual embedded Gigabit NICs for networking and can be outfitted with a DRAC 4/I for remote monitoring.

PowerEdge 2850

The performance, storage, and compact size of the PowerEdge 2850 make it an excellent choice as a database server, network infrastructure device, file-and-print server, high-availability branch office server, or consolidated enterprise server.

The PowerEdge 2850 can be scaled to 1.8 TB with up to six hot-pluggable SCSI drives (or five HDDs and one tape drive). It also offers six I/O channels and features a tool-less chassis that allows technicians to service many of the components without removing the unit from the rack.

The PowerEdge 2850 features new high-availability features and a highly flexible chassis configuration, but it truly shines with new performance features. In the NetBench network server test, the PowerEdge 2850 outpaces the PowerEdge 2650 by delivering:

- An 18 percent greater performance at its peak throughput rate

- Support for 9 percent more clients at its peak throughput rate
- A 16 percent throughput advantage at the maximum tested client load⁵

Dell services evolve with technologies

Dell offers a broad portfolio of services to assist companies in deploying servers, optimizing IT technologies, and training IT professionals. With expert advice and technical assistance through a single point of contact, Dell can help companies reduce overall total cost of ownership (TCO) while enabling them to evolve with the times.

For more information:

In the U.S.: www.dell.com/poweredge

In Europe: www.euro.dell.com

In Asia: www.dell.com/ap

¹ Requires 64-bit operating system and application.

² This term does not connote an actual operating speed of 1 Gbps. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.

³ For hard drives, GB means 1 billion bytes; actual capacity varies with preloaded material and operating environment, and will be less.

⁴ Based on the NetBench 7.02 benchmark test performed by Dell Labs in August 2004 on the PowerEdge 1850 as compared with the PowerEdge 1750. Actual performance will vary based on configuration, usage, and manufacturing variability. Tested configurations for both servers: Dual Intel Xeon processors at 3.2 GHz; 1 GB RAM; two 36 GB 15,000 rpm hard drives; RAID-1 with write-back cache; and Microsoft® Windows Server™ 2003, Standard Edition.

⁵ Based on the NetBench 7.02 benchmark test performed by Dell Labs in August 2004 on the PowerEdge 2850 as compared with the PowerEdge 2650. Actual performance will vary based on configuration, usage, and manufacturing variability. Tested configuration for both servers: Dual Intel Xeon processors at 3.2 GHz; 2 GB RAM; five 36 GB 15,000 rpm hard drives (one OS drive and four data drives with RAID-0); RAID controller with write-back cache; and Windows Server 2003, Standard Edition.