Dell PowerEdge VRTX

Much more affordable for SMBs than a blade server, and in some ways a better fit

PC PRO RECOMMENDED

>> **PRICE** From £8,600 exc VAT
>> **SUPPLIER** www.dell.co.uk

Blade servers may be great for consolidating all IT services on a single hardware platform, but they've always been beyond the means of SMBs. Dell's latest PowerEdge VRTX is an interesting alternative: it takes blade-server technology, adds a few twists of its own and makes it much more affordable.

Aimed squarely at SMBs and remote offices, the VRTX is designed to operate in normal office environments without the need for additional cooling or soundproofing. Key features are its unique shared storage and PCI Express architecture, which add an extra level of versatility not found in blade servers.

Offered as a floor-standing pedestal with wheels or a 5U rack chassis, the VRTX supports up to four hotplug server nodes, and you can choose two different types: the M520 or M620 nodes. These have the same specification as those


used by the full-fat Dell PowerEdge M1000e blade server, but they're not interchangeable since the VRTX models use different firmware.

The chassis employs a passive midplane to connect the nodes to networking, power, storage and management services. Each node has an embedded PERC H310 RAID controller and two SFF drives, but main storage is provisioned from the drive bays alongside.

Up to 12 LFF or 25 SFF drive bays can be ordered, and these are managed by the shared PERC8 on the chassis planar (see ❶). Using the chassis web management interface, you select drives from the pool and create virtual disks, each of which has its own RAID array type. These are then assigned to a virtual adapter that is, in turn, assigned to a node slot.

When the node is powered up, it sees the shared PERC8 and the virtual drive as local storage. This makes the VRTX more flexible than blade servers, which must rely either on local node storage, additional disk blades or SAN links, using mezzanine cards and proprietary I/O modules.

Another clever design feature is the VRTX's PCI Express architecture. The chassis has eight PCI Express Gen2 slots (see ❷), which can be assigned to any server node. The advantage of this over standard

❍ Shared storage makes the VRTX more flexible
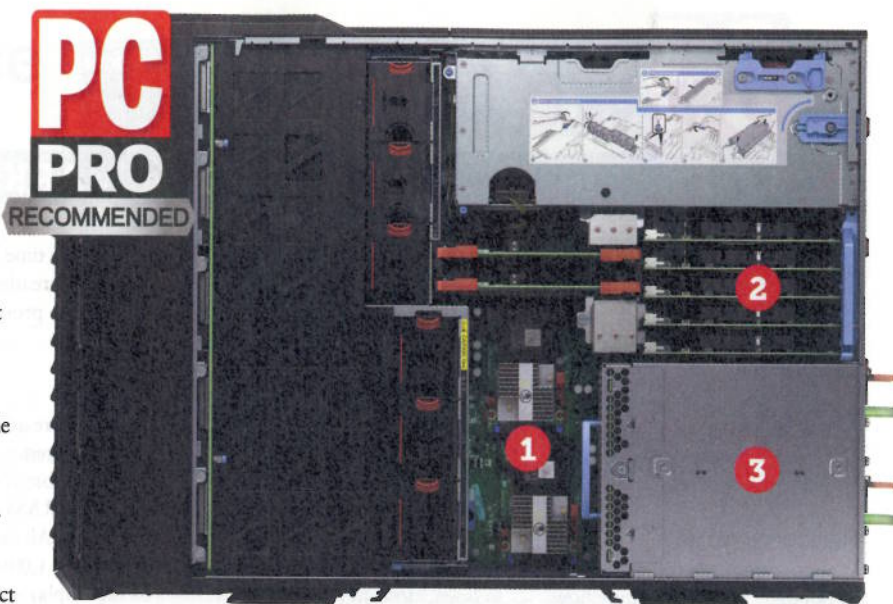
blade servers is that the VRTX doesn't lock you into proprietary I/O solutions. If you want to connect a node to a Fibre Channel (FC) SAN, you buy a standard FC HBA. A blade server would require an FC mezzanine card fitted to the server blade and an FC SAN I/O module installed at the back.

For networking, each VRTX node has a 10GbE mezzanine card, which links directly via the midplane to an eight-port switch at the rear. This is a basic L2 Gigabit switch and Dell plans to offer a 10GbE version as well.

The chassis also supports up to four redundant 1,100W hotplug PSUs (see ❸). Cooling is handled by four hotplug fan modules at the rear, plus six inside, and we found the system remarkably quiet. Power consumption was low, at only 185W.

Our review system came with all four PSUs and two M620 dual-CPU 2GHz E5-2650 server nodes. One node with Windows Server 2012 in idle increased this to 272W, and this rose to 338W with the second node installed. Using SiSoft Sandra, we recorded peak draws of 405W for one server node and 604W for both.

For management, there's a small, colour LCD panel and keypad at the front for basic configuration and monitoring. There's also a KVM module below, which can be assigned to any node using the keypad.

The web interface for the chassis management controller (CMC) is well designed and gives full access to all components. It

opens with graphical views of the front and rear of the chassis, and delivers fault alerts and overviews of storage and power usage. There are quick links for common tasks, and we found it simple to assign virtual disks and PCI Express slots to the nodes. A menu to the left provides access to each node, complete with power controls and access to the iDRAC7 controller.

Prices start at a reasonable £8,600 exc VAT for a base system, which includes two M520 nodes, each with a 1.8GHz E5-2403 Xeon, 8GB of DDR3, a 500GB SATA drive and Dell's iDRAC7 Express controller. This system comes with a single CMC, dual 1,100W PSUs and three 1TB Nearline SAS drives.

The PowerEdge VRTX is an ideal consolidation solution for SMBs and remote offices that can't justify the expense of a blade server. It's built like a tank, extremely quiet, and its shared storage and PCI Express architecture make it more versatile, too. **DAVE MITCHELL**

KEY SPECS

5U rack or pedestal chassis • 12 x LFF or 25 x SFF shared hot-swap drive bays • shared PERC8 (max 2) • supports RAID0, 1, 5, 6, 10 • 8 x PCI-E Gen2 shared slots • Dell PowerEdge M520 or M620 server nodes (max 4) • 8-port L2 Gigabit switch blade • 1,100W hotplug PSUs (min 2, max 4) • Dell CMC Enterprise (max 2 CMCs) • 3yr on-site NBD warranty on chassis and nodes

OVERALL ★★★★☆
PERFORMANCE ★★★★☆
FEATURES & DESIGN ★★★★★
VALUE FOR MONEY ★★★★☆