Spotlight on success

Dell PowerEdge R720 server: Powerful, flexible building block for critical IT infrastructure

Today, business success often hinges on the right IT foundation. High compute capacity and outstanding versatility are key characteristics that make the Dell™ PowerEdge™ R720 12th-generation server a standout.
 The PowerEdge R720 plays an important role in heightening performance and productivity across a wide spectrum of real-world environments that range from small server clusters to large, infrastructure-wide solutions. The following customer use cases show how companies around the world are advancing business outcomes to gain a competitive edge with PowerEdge R720 server deployments.

Accelerating throughput and performance scalability

The Dell PowerEdge R720 server is engineered with 12th-generation technology that delivers an exceptional combination of features and scalable performance to handle tough workloads for both large and small data center environments.

- **Power:** The Intel® Xeon® processor E5-2600 product family provides up to eight cores per processor for computing-intensive tasks.
- **Data reliability:** Up to two internal RAID controllers enhance throughput and storage reliability.
- **Enhanced I/O:** LSI CacheCade technology accelerates database performance by caching the most frequently accessed data.

- **Extensibility:** Seven PCI Express (PCIe) 3.0–capable expansion slots enable capabilities such as graphics processing unit (GPU) acceleration.
- **Flexible networking:** Dell PowerEdge Select Network Adapters provide a choice of gigabit Ethernet (GbE) or 10GbE speed.
- **Availability:** Dual embedded fail-safe hypervisors help ensure maximum productivity for virtualization.
- **Easy management:** The Dell OpenManage™ toolset, which features the Integrated Dell Remote Access Controller 7 (iDRAC7) with Lifecycle Controller, is designed to simplify, streamline and automate everyday management tasks.

Up to €100,000 yearly savings

"The personnel at abtis know how to get the best out of Dell solutions. They know that when you develop a complete infrastructure on Dell, you gain more than the sum of the individual solutions."
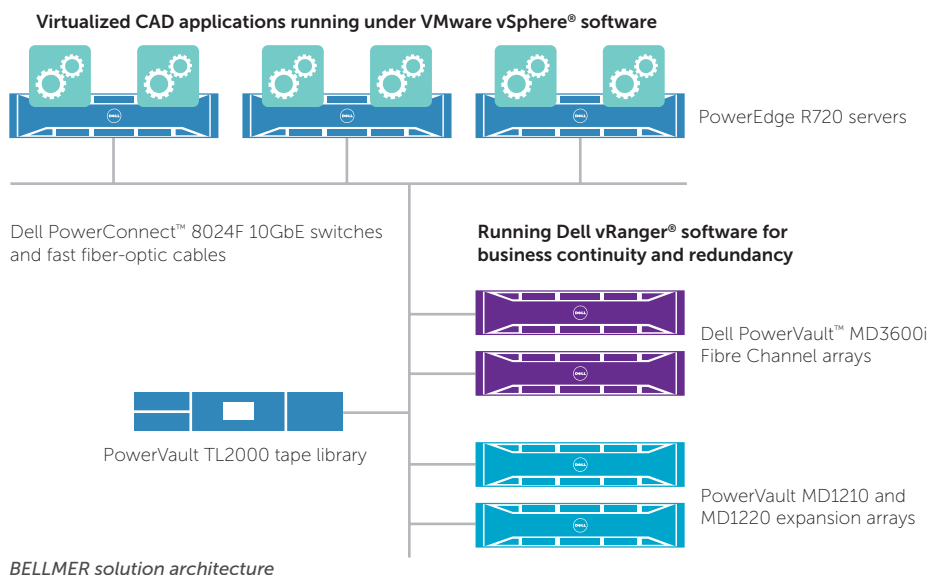
— **Uwe Hatlapatka**
IT manager at BELLMER

Improving CAD performance

BELLMER, a manufacturer of paper production machinery and equipment headquartered in Germany, recently saw tremendous improvements in productivity by upgrading its entire IT infrastructure with integrated Dell solutions. Previously, the performance of the company's computer-aided design (CAD) teams had been significantly affected by a lack of hardware speed and network bandwidth. The teams regularly faced downtime, which in turn increased costs and threatened project schedules.

Working with a Dell partner, abtis, BELLMER holistically evaluated its environment and determined that the optimum approach was a comprehensive infrastructure update based on Dell PowerEdge R720 servers together with Dell networking and storage infrastructure. Today, BELLMER enjoys significant improvements across the business:

- 35 percent CAD productivity boost
- Up to €100,000 per year in cost savings
- Full data backups in hours, not days

Virtualized CAD applications running under VMware vSphere® software

PowerEdge R720 servers

Dell PowerConnect™ 8024F 10GbE switches and fast fiber-optic cables

Running Dell vRanger® software for business continuity and redundancy

Dell PowerVault™ MD3600i Fibre Channel arrays

PowerVault TL2000 tape library

PowerVault MD1210 and MD1220 expansion arrays

BELLMER solution architecture

For the full case study details, go to **qrs.ly/2z3b1od**

40%
less rack space

Hosting fast, highly available supply-chain services

MavenWire is a U.S.-based company that hosts supply-chain management services to manufacturers ranging from mid-market companies to the Fortune 500. The company's expertise in Oracle® transportation management (OTM) software enables it to ensure a fast, cost-effective turnaround for its customers.
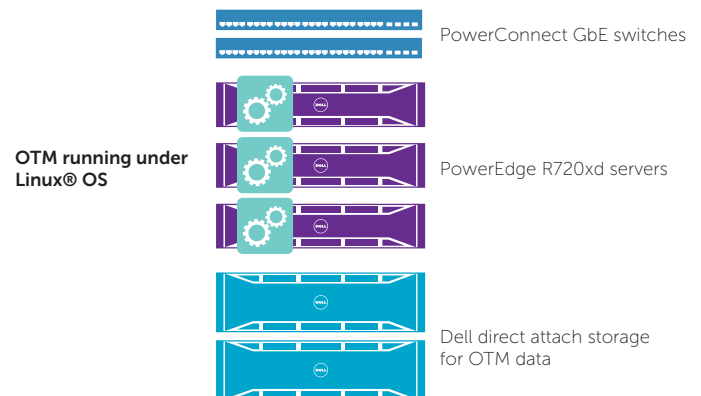
An infrastructure that supports top performance for OTM is critical to the success of MavenWire's business. So the high spindle count, low-latency design features of PowerEdge R720xd servers made perfect sense for MavenWire when it wanted to increase transactional performance for its clients. Plus, each PowerEdge R720xd server houses 26 disk drives for internal storage capacity up to 26 TB, allowing MavenWire to optimize redundant RAID configurations and heighten availability for its clients.

MavenWire is now profiting from the benefits of its Dell-based infrastructure:

- Up to three times faster database performance with Dell PowerEdge 12th-generation servers, compared to the previous server deployment
- 99.9 percent uptime enabled for service-level agreements
- 40 percent reduction in rack space per customer

For the full case study details, go to
qrs.ly/az3b1oj

"OTM has very latency-sensitive workloads. A rackable server with 24 disks noticeably increases database performance. Combined with the integrated storage, it was a significant driver for us in choosing the PowerEdge 720xd as a database server."

— Ryan Harney
Systems administrator at MavenWire

PowerConnect GbE switches

OTM running under Linux® OS

PowerEdge R720xd servers

Dell direct attach storage for OTM data

MavenWire solution architecture

> "We're more competitive because we don't need to spend money every time we want to scale or launch a new server. The infrastructure is virtual."

— **Shaun Phillips**
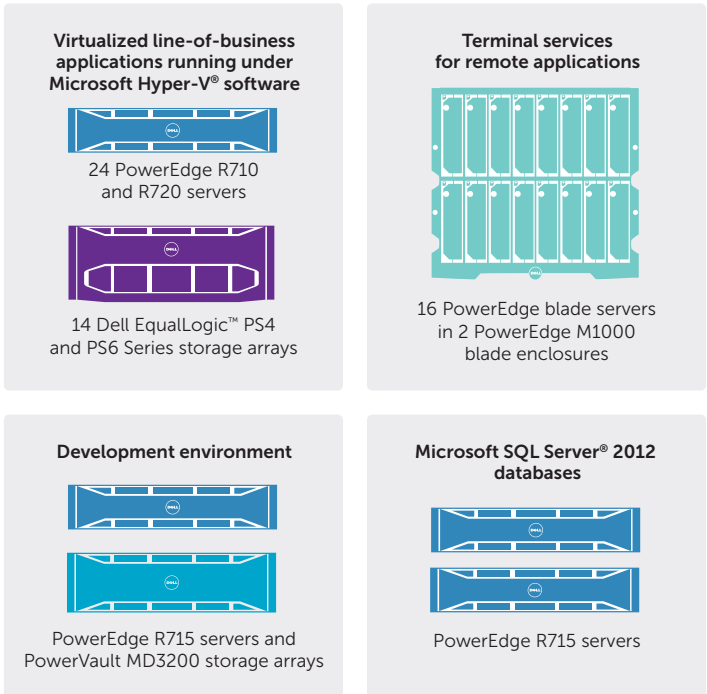*General manager of IT operations and infrastructure at Europcar*

Gaining rapid expansion through a Dell private cloud

Car rental company Europcar, based in South Africa, has sharpened its competitive advantage with top-flight business agility from a private cloud developed using its existing infrastructure, Dell PowerEdge 12th-generation servers and the Microsoft® Windows Server® 2012 OS. The company's bookings and reservations system, along with its enterprise resource planning and customer relationship management applications, are now on the private cloud infrastructure.

Europcar has seen dramatic results from moving its business to a private cloud that comprises four redundant clusters split across two data centers:

- Up to 90 percent improvement in IT productivity
- 44.5 percent reduction in virtual machine launch times, from 45 minutes to 25 minutes
- 15-minute disaster recovery times, down from over 2 hours

For the full case study details, go to **qrs.ly/xk3b1ok**

50 60 70 80 90 100

Up to
90%
IT productivity boost

Virtualized line-of-business applications running under Microsoft Hyper-V® software

24 PowerEdge R710 and R720 servers

14 Dell EqualLogic™ PS4 and PS6 Series storage arrays

Terminal services for remote applications

16 PowerEdge blade servers in 2 PowerEdge M1000 blade enclosures

Development environment

PowerEdge R715 servers and PowerVault MD3200 storage arrays

Microsoft SQL Server® 2012 databases

PowerEdge R715 servers

Europcar solution architecture

DELL

30% lower energy costs

"Now, thanks to the deployment of the Dell solution, we're running at 48 percent utilization, with an increase in virtual machines and a test and production-ready environment for Microsoft SharePoint."
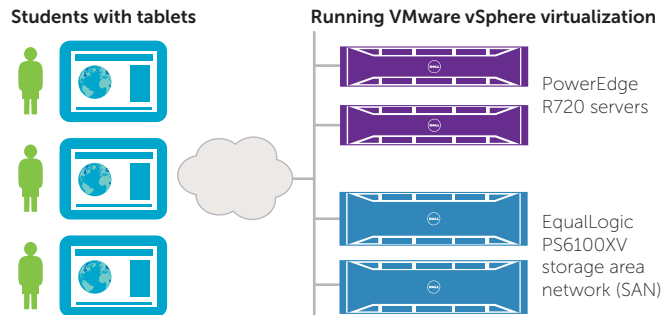
— Matthew Wintour
IT director at Somerville House

Enriching the learning experience at a lower cost

Somerville House, a top-ranked day and boarding school for girls in Brisbane, Australia, believes that using technology to help provide a rich learning experience is the key to remaining in the forefront of education. To help meet this goal, the school decided to deploy tablet computers to students in grade 6 and up, and chose Dell Latitude™ XT3 tablet PCs.

At the same time, Somerville House created a virtualization environment to enhance support for expanded student mobility and teacher collaboration through videoconferencing and Microsoft SharePoint® software. The Dell tablets wirelessly connect to Dell PowerEdge R720 servers running the VMware vSphere virtualization platform.

In addition to enhanced learning and teacher collaboration, the Dell solution has delivered outstanding IT operational outcomes for Somerville House:

- Reduced storage administration costs by 30 percent
- Reduced energy consumption by 30 percent
- Integrated rich media and electronic workflows to advance learning

Students with tablets   **Running VMware vSphere virtualization**

PowerEdge R720 servers

EqualLogic PS6100XV storage area network (SAN)

Somerville House solution architecture

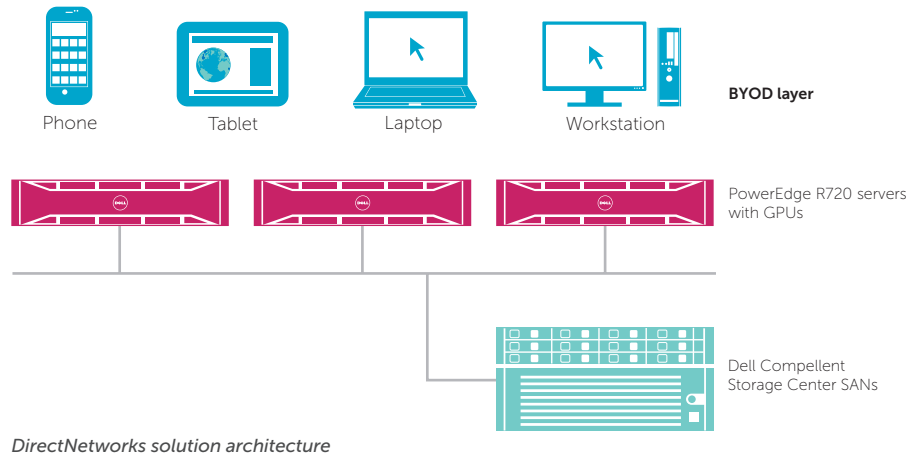For the full case study details, go to
qrs.ly/2h3b1oo

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DELL

Twice
the virtual desktops per server

Building a cloud-based VDI solution

DirectNetworks is a U.S.-based managed services company that reevaluated its IT infrastructure to improve the virtual desktop infrastructure (VDI) solution it offers to the many small businesses that are embracing bring-your-own-device (BYOD) initiatives.

The company wanted to increase capacity to support more virtual desktops, but it also wanted to minimize the rack footprint and power usage in colocated data centers. DirectNetworks decided to implement PowerEdge R720 servers, which are designed to accelerate virtual desktop performance using multi-core GPU accelerators. In addition, Dell Compellent™ Storage Center™ SAN arrays perform automated storage tiering to enhance performance while helping to reduce costs.

Phone   Tablet   Laptop   Workstation

BYOD layer

PowerEdge R720 servers with GPUs

Dell Compellent Storage Center SANs

DirectNetworks solution architecture

The Dell-based infrastructure has brought significant advantages:

- Scales to serve up to 10 times more customers with a 50 percent smaller rack footprint
- Runs twice as many virtual desktops per server
- Supports 99.99 percent uptime for VDI customers

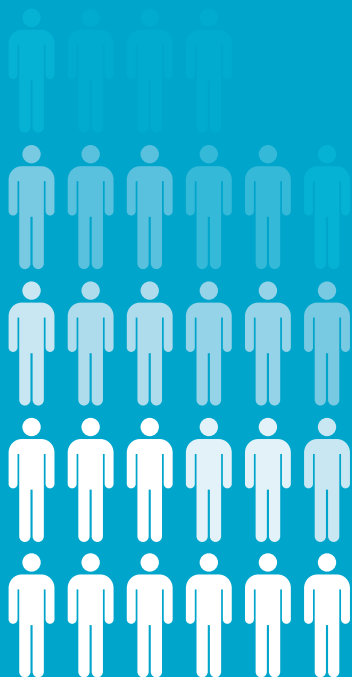"What we like about the Dell PowerEdge R720 is that it's built to be a virtual desktop host, and it's flexible."

— **Steven Soliman**
President at DirectNetworks

For the full case study details, go to **qrs.ly/nb3b1pa**
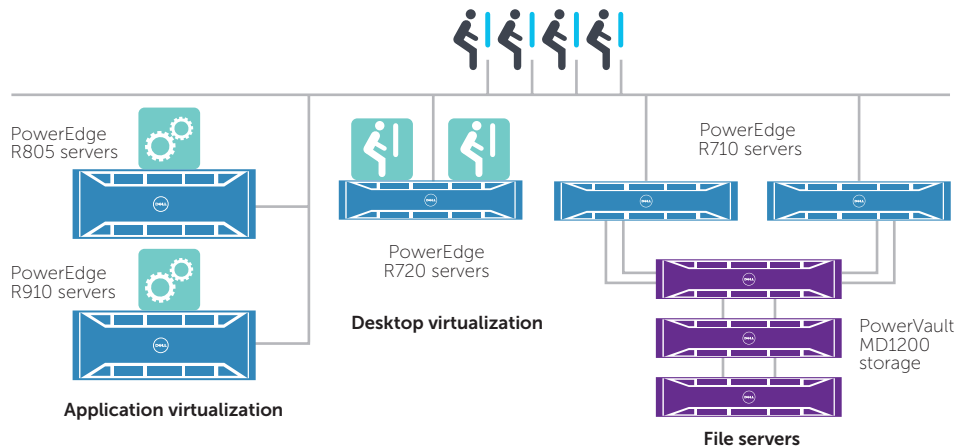
Inspiring a thoughtful data center redesign

NTTX Select, a UK-based service provider focused on the needs of small and medium-size enterprises, needed a flexible and scalable environment to deliver expanded services to its customers—without having to allocate expensive, dedicated resources to each user.

When NTTX Select heard about the innovative virtualization capabilities in Windows Server 2012 and Dell PowerEdge 12th-generation servers, they were inspired. They architected an infrastructure that uses Dell hardware to provide a stable platform for the entire data center: VDI delivery services driven through PowerEdge R720 servers, scaled-out file servers with PowerEdge R710 servers and Dell PowerVault MD1200 storage, and a virtualization solution that runs on PowerEdge R910 and PowerEdge R805 servers.

NTTX Select is reaping the rewards of its thoughtful redesign based on Dell infrastructure:

- All workloads are now virtualized
- Expansion of services enables expected customer growth of 400 percent
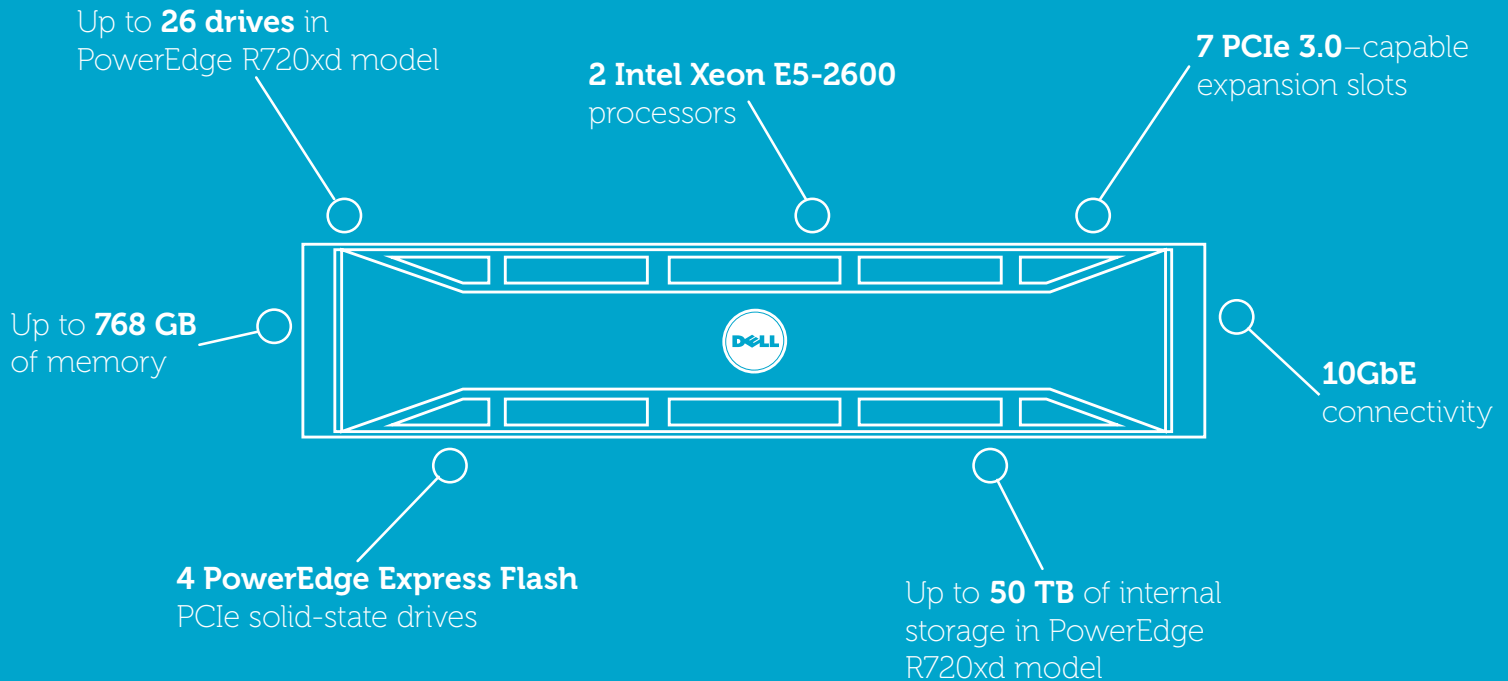- Reduced operating costs maximize lifecycle savings

PowerEdge R805 servers

PowerEdge R910 servers

Application virtualization

PowerEdge R720 servers

Desktop virtualization

PowerEdge R710 servers

PowerVault MD1200 storage

File servers

NTTX Select solution architecture (high-level concept)

400%
expected customer growth

For the full case study details, go to
qrs.ly/2k3b1pc

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PowerEdge R720 by the numbers

Boost business results with PowerEdge R720 features and upgrade options

Up to **26 drives** in PowerEdge R720xd model

2 Intel Xeon E5-2600 processors

7 PCIe 3.0–capable expansion slots

Up to **768 GB** of memory

10GbE connectivity

4 PowerEdge Express Flash PCIe solid-state drives

Up to **50 TB** of internal storage in PowerEdge R720xd model

Performing in the test lab and on the job

These are just a few of the successes that companies of all sizes have achieved with Dell PowerEdge R720 12th-generation servers. In addition to delivering tangible real-world results, the PowerEdge R720 was named *CRN* 2012 Product of the Year,[1] turning in the fastest Geekbench score seen in the *CRN* Test Center up to that time.[2] With its versatility, flexibility and exceptional management tools, the PowerEdge R720 is providing outstanding value and reliability in environments like yours.

For more information

To learn more about Dell PowerEdge R720 servers, ask your Dell representative or visit:

www.dell.com/us/business/p/poweredge-r720/pd

[1] Source: "Winner Dell PowerEdge R720 Rack Server," *CRN* Products of the Year 2012, i.ubm-us.net/crn/custom/Dell2012ProductofYear Advertorial.pdf

[2] Source: "Battle of the Titans: HP's ProLiant DL380p vs. Dell's PowerEdge R720," by Edward J. Correia, *CRN*, July 12, 2012, crn.com/news/data-center/240003565/ battle-of-the-titans-hps-proliant-dl380p-vs-dells-poweredge-r720.htm

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