

# Transform the data center

## Customer Solution Case Study



**Customer:** Cornelsen  
**Website:** [www.cornelsen.de](http://www.cornelsen.de)  
**Customer Size:** 2,000 employees  
**Country or Region:** Germany  
**Industry:** Media and entertainment—Publishing  
**Partner:** Phat Consulting  
**Partner Website:** [www.phatconsulting.de](http://www.phatconsulting.de)

### Customer Profile

Cornelsen is an education publisher based in Berlin, Germany. It develops, designs, and distributes educational and reference materials in a variety of media to schools across Germany.

### Software and Services

- Microsoft Server Product Portfolio
  - Windows Server 2012 R2 Datacenter
  - Microsoft System Center 2012 R2
- Microsoft Services
  - Microsoft Services Consulting
- Technologies
  - Hyper-V

### Hardware

- Dell PowerEdge servers

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## Publisher Reduces Virtualization Costs by 30 Percent by Running Linux on Hyper-V

“Instead of maintaining two virtualization environments, we can maintain just one, Hyper-V. The savings will be enormous—at least a 30 percent reduction in virtualization software fees.”

Norbert Fisch, Head of IT Operations, Cornelsen

Cornelsen, a leading education publisher in Germany, is switching from VMware to Hyper-V in Windows Server 2012 R2 to run both Windows and Linux-based workloads. Linux applications run better than ever under Windows Server 2012 R2, and Cornelsen will reduce virtualization licensing costs by 30 percent by replacing VMware. By using Microsoft System Center 2012 R2, Cornelsen streamlines data center management and speeds server delivery by 30 percent.

### Business Needs

Since 1946, Cornelsen has been producing award-winning educational materials for German primary and secondary schools. With an annual turnover of €350 million (US\$482 million), Cornelsen is one of the largest publishing companies of any kind in Germany. It has 23,000 titles in print, which it distributes in printed and electronic form. Cornelsen is based in Berlin and employs 2,000 people.

The publishing business is in the midst of a transformation from paper to digital. Cornelsen has morphed from a traditional book publisher to a multichannel, on-demand content provider, adapting its

content to new delivery methods such as websites, tablet computers, and smartphones, and keeping its content updated more frequently. The company created a larger and more robust data center environment to accommodate digital services, which caused IT costs to rise.

To help reduce costs and complexity, Cornelsen standardized on Microsoft software for all internal operational applications, such as email messaging, productivity software, infrastructure management, customer relationship management, and databases. It further used the Hyper-V virtualization technology

in the Windows Server 2008 R2 and Windows Server 2012 operating systems to virtualize these workloads.

However, because the education software environment has deep roots in open source software and the Linux operating system, most of its customer-facing educational products and services ran on Linux-based servers virtualized with VMware software. VMware licensing fees were high and managing two virtualization environments was a time drain on IT staff.

Additionally, with the overall pace of business accelerated by digital services, Cornelsen wanted to speed up its server-build process. While it was making more progress with its Windows Server environment, thanks to the use of Microsoft System Center 2012 data center solutions, the VMware management tools did not feature the same level of automation.

## Solution

Norbert Fisch, Head of IT Operations at Cornelsen, had been watching the development of Hyper-V in hopes that he could one day satisfactorily run Linux workloads under Hyper-V. Cornelsen joined the Microsoft Rapid Deployment Program (RDP) for the Windows Server 2012 R2 operating system so that Fisch and his staff could become familiar with the software's expanded Linux integration components, a set of drivers that Microsoft has contributed to the Linux kernel that improves performance and functionality of virtualized Linux instances running on Hyper-V.

"Most of our environment is Microsoft, and we've watched Hyper-V steadily improve," Fisch says. "With the addition of the new Linux integration components and many other enhancements, it's now even more perfect for our business."

During the RDP, the Cornelsen IT staff worked with both Microsoft Services Consulting and Phat Consulting, its longtime IT consultant, to quickly

understand the new Linux integration components and connect them to its infrastructure. Microsoft Services Consulting also provided training for the Cornelsen staff.

Cornelsen deployed Windows Server 2012 R2 Datacenter on three Dell PowerEdge servers that currently host approximately 100 virtual machines that run the SUSE Linux Enterprise Server 11 operating system. Cornelsen plans to keep older Linux-based virtual machines on VMware because of support issues but build all new Linux-based virtual machines on Hyper-V. "Over time, our number of Linux-based applications is diminishing, because we're converting most of our Linux applications to Windows," Fisch says. "We will ultimately migrate our complete infrastructure to Hyper-V." Cornelsen will also migrate all Windows-based virtual machines (roughly 300) to Windows Server 2012 R2.

At the same time that it deployed Windows Server 2012 R2, Cornelsen upgraded to Microsoft System Center 2012 R2, which it uses to manage both Windows and Linux environments. Fisch and his staff use the entire System Center suite, including the Orchestrator component for workflow automation, the Service Manager component for building a self-service IT services catalog, and the Operations Manager component for monitoring the server environment. "From the initial request for a server to the delivery of that server and all the reporting behind it, everything is automated," Fisch says. "This is a completely new capability for us, to deliver virtual machines in such an automated fashion from beginning to end, and to do it for both Windows and Linux-based virtual machines."

## Benefits

By upgrading to Windows Server 2012 R2 and System Center 2012 R2, Cornelsen will be able to phase out VMware and reduce virtualization costs by at least 30 percent.

Streamlining data center management also reduces costs. With a common virtualization platform, Cornelsen can deliver IT services faster, which improves business agility.

### Reduce Virtualization Costs by 30 Percent

The biggest savings related to running Linux workloads under Hyper-V comes from eliminating VMware licensing fees. "Instead of maintaining two virtualization environments, we can maintain just one, Hyper-V," Fisch says. "The savings will be enormous—at least a 30 percent reduction in virtualization software fees. The Microsoft licensing model is much more attractive."

The other significant area of savings is data center management time. "Our staff can be much more efficient by using one management console to manage everything," Fisch says. "System Center delivers a huge productivity gain to our staff; we can automate our server-build process end to end, which we could never do with VMware. We could see perhaps a 20 percent time savings."

### Reduce Server Delivery Time by 30 Percent and Improve Business Agility

Not only does Cornelsen save money by running all its workloads under Hyper-V; it also gains faster service delivery, which is so important in the fast-moving digital publishing market. "If we create an online title or an app that turns out to be extremely popular, we need to be able to build out the back-end infrastructure as quickly as possible to accommodate the traffic," Fisch says. "By using System Center 2012 R2 for Windows and Linux workloads, we can reduce our server deployment time by 30 percent. We can also run larger workloads on the new version of Hyper-V, which frees us to deploy exactly what the business needs, when it needs it, with no barriers."