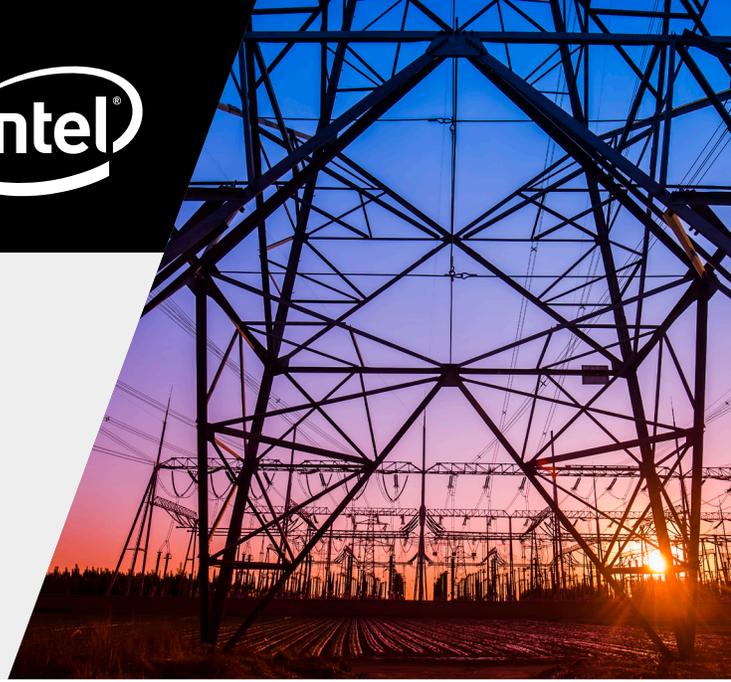# FASTER DEVELOPMENT

Company boosts software developers' productivity with the technologies in Dell EMC Microsoft Storage Spaces Direct Ready Nodes.

MECOMS™
a Ferranti company

MECOMS | Utility Software | Belgium

Business needs

MECOMS™, a Ferranti company, needed a higher-performance compute and storage environment to increase the productivity of its software-development team.

Solutions at a glance

- Microsoft® Storage Spaces Direct software
- Dell EMC PowerEdge™ R730xd servers with Intel® Xeon® processors
- Integrated Dell EMC storage and networking
- Dell Remote Services

Business results

- Increased the productivity of software developers

- Accelerated throughput for code compilation

- Eliminated the need for traditional storage arrays

Some code compilation jobs run nearly

Twice as fast
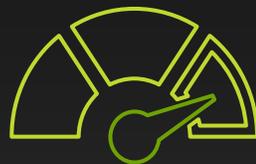
A 3-hour process has been reduced to just

10 minutes

Taking utilities to a higher level

Energy providers and utility companies around the world want to be ever more flexible and agile in serving their customers, while keeping a tight rein on their operational costs. Belgium-based MECOMS™, a Ferranti Computer Systems company, helps them get there today.

MECOMS builds flexible meter data management, customer care and billing systems that help water, gas, electricity and district heating companies quickly and easily adapt to changing business needs, both in regulated and deregulated markets. The company's systems enable both large and small companies to streamline business processes and combine high efficiency with first-class customer service. These same systems also help utilities gain the insights they need to detect operational inefficiencies and discover new business opportunities.

The company's flagship MECOMS™ system for energy providers and utility companies, which debuted in 2005 on the Microsoft Dynamics AX platform, has been implemented in more than 40 utilities around the world.

Moving to Microsoft Dynamics 365

The MECOMS development team specializes in software based on the Microsoft Dynamics family of enterprise resource planning (ERP) software products. Today, the development team is in the process of moving the company's groundbreaking utility software from Microsoft Dynamics AX 2012 to the next-generation Microsoft Dynamics 365 platform for Finance and Operations.

As part of this software upgrading and re-platforming effort, the MECOMS product team needed dedicated development machines to support the upgrade of its software product family to the Microsoft Dynamics 365 environment. The performance of these machines is crucial to the company's developers, who spend their time coding, compiling and testing their software — because when it comes to software development, system performance and developer productivity walk hand in hand.

The legacy MECOMS environment, which is still used by some of the company's developers, encompasses two compute clusters based on Dell EMC PowerEdge™ servers running Microsoft Windows Server 1709 and the Microsoft Hyper-V hypervisor. One cluster, with 12 nodes, serves as a development environment, and the other, with six nodes, serves as a production environment. These clusters connect to the two storage pools based on Dell™ EqualLogic™ PS6110 Series disk arrays.

With a focus on higher system performance and greater developer productivity, the IT team at MECOMS made the decision to rev up its development environment by moving to Microsoft Storage Spaces Direct and other technologies that are now available in Dell EMC Microsoft Storage Spaces Direct Ready Nodes.

The solution

Microsoft Storage Spaces Direct, known informally as S2D, uses industry-standard servers with local-attached drives to create highly available, highly scalable software-defined storage (SDS) at a fraction of the cost of traditional SAN or NAS arrays. Its hyper-converged architecture simplifies procurement and deployment, while features such as caching, storage tiers and erasure coding, together with hardware innovations such as RDMA networking and NVMe drives, deliver unrivaled efficiency and performance.

For the initial implementation of its next-generation development platform built around Storage Spaces Direct, MECOMS chose a six-node cluster based on Dell EMC™ PowerEdge™ R730xd servers running Windows 2016. The combination of Storage Spaces Direct and Dell EMC PowerEdge R730xd servers negates the need for separate disk arrays to provide storage for the compute cluster. The storage is built right into the server in a hyper-converged architecture that seamlessly blends storage and compute resources.

The IT professionals at MECOMS built their own Storage Spaces Direct clusters, following Dell EMC deployment and configuration guides for S2D clusters on PowerEdge servers. After the installation of the system, the IT team worked with engineers from Dell EMC to review and refine the system configurations, and then the system went live. The initial deployment of the system is serving the needs of 25 software developers.

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Today, the rich mix of technologies used in the MECOMS development system are available in preconfigured Dell EMC Microsoft Storage Spaces Direct Ready Nodes, which simplify and accelerate the deployment of S2D. The Ready Nodes are optimally configured with the required amount of CPU, memory, network, I/O controllers and storage (SSDs, HDDs or flash devices). They give IT leaders the confidence and convenience that comes with preconfigured, tested and certified configurations designed for Storage Spaces Direct and backed by world-class support delivered by Dell EMC, which serves as the single point of contact for the entire Ready Solution.

Storage Spaces Direct Ready Nodes are built on Dell EMC PowerEdge™ servers with Intel® Xeon® Scalable processors. These servers provide the compute power and the storage density that IT leaders need to take full advantage of the benefits of Storage Spaces Direct and the advanced features in Windows Server 2016.

For Piet Van Kerckhove, Shared Service Center Manager at MECOMS, the rich mix of technologies incorporated in Dell EMC Microsoft Storage Spaces Direct Ready Nodes offers the right combination to help the company accelerate the development of a new generation of the MECOMS platform.

"This solution was the best choice to give us the performance and reliability we needed, and also it gives us the possibility to scale up if we need it," Van Kerckhove says.

The payoff: 'a serious performance upgrade'

The decision to move to Storage Spaces Direct was fairly straightforward for Van Kerckhove and his IT colleagues at MECOMS.

"We had determined that the bandwidth going to the SAN was an issue with our legacy development environment," Van Kerckhove says. "The Storage Spaces Direct environment gives us the opportunity to lower the bandwidth performance decrease, or the latency, because it's all integrated into one environment. The storage is in the cluster itself. So it was an obvious choice to use Storage Spaces Direct. It was a huge improvement."

One of the key goals of the project was to greatly increase system performance to help developers reduce the time required to compile code and get their results, Van Kerckhove notes. They are now meeting that objective. One compilation process, for example, is now running almost twice as fast as it ran on the legacy system. And before the move to Storage Spaces Direct, it was taking up to three hours to compound the results of compilations. Today, the same process takes about 10 minutes.

"I think there was a mind shift for the developers when we went to Storage Spaces Direct," Van Kerckhove says. "They used to do their coding task during the day, and at night they did one compile. In the morning they came back to see if it ran. Now with Storage Spaces Direct, they can do a compile while they are getting coffee or lunch, so there's a possibility to see more of the results of their tasks during the day and not wait until the next day. Twice as fast is good, but the most important thing is that they can do it during the daytime and not have to wait until the night."

That ability equates to greater productivity and faster development of the software that keeps the company competitive.

"Performance was key in this implementation," Van Kerckhove says. "The hyper-converged solution gave us the outcome we need. We can now spend more man-days on building and writing code, instead of waiting for the system to compile code."

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Shared Service Center Manager, MECOMS

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Looking ahead: S2D for all

As the IT leaders at MECOMS look to the future, they are laying the groundwork to extend their Storage Spaces Direct cluster to meet the needs of all of the developers working on the MECOMS system. The S2D cluster that is now supporting 25 developers will soon support around 200 developers, with everyone working on Microsoft Dynamics 365. In many cases, the company's end customers will access the Dynamics 365-based MECOMS system via Microsoft Azure cloud.

As they push forward into this new, more productive era, the IT leaders at MECOMS expect to continue to work in close partnership with Dell EMC.

"Almost seven years ago we made the switch to Dell EMC only for our internal use," Van Kerckhove says. "And today we are very satisfied with the delivery and support we get from our local Dell EMC team. It's a very good relationship, both for us and for Dell EMC."

Learn more about the solution at
DellEMC.com/wssd

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DellEMC.com/softwaredefined

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