DXi-Series & Scalar Series

Measuring Success for Years to Come: Quantum Deduplication and Tape Solutions Cut The Mahr Group's Backup Down to Size

The Mahr Group is one of the largest precision instrument manufacturers. Over the last several years, the company's data volume has grown, overwhelming its legacy backup systems. The solution: next-generation data protection from Quantum. With Quantum's DXi deduplication appliance and Scalar tape library, The Mahr Group has a future-proof backup solution for all of its physical and virtual servers.

For 150 years, manufacturers all over the world—from the automotive industry to medical equipment producers—have relied on precision measuring instruments from The Mahr Group. This consortium of companies is the world's third-largest producer of production measurement solutions and offers an extensive product portfolio ranging from large manual calipers to precise digital measuring instruments. Founded in Esslingen, Germany, today The Mahr Group has a global focus with subsidiaries and customers around the world, including Europe, China, and the United States.

Creating production measurement products requires a complex, data-intensive working environment. Technicians and engineers draw on a variety of different computer–aided design (CAD) systems that create gigabyte-sized images and large video files. The company's 1,700 employees are constantly using databases, which include MySQL, Oracle, and Microsoft Exchange, and Windows applications, such as Office and SharePoint. The result is a massive amount of data that is constantly increasing.

KEEPING UP AS DATA VOLUMES DOUBLE
"Over the last five years, our data volume has doubled, and keeping up has become an ever-increasing challenge," explains Thomas Wendt, The Mahr Group's backup administrator.

For years the IT team has trusted Quantum to provide new technology to help the company manage its evolving backup and disaster recovery needs. Initially, the IT team replaced its multiple external tape drives with its first tape library when its data outgrew the older system's capacity. Later the team moved to the next generation of tape libraries, the Quantum Scalar® i500, and Quantum's early DXi®-Series disk backups and deduplication appliances.

However, as The Mahr Group's IT team added server virtualization, new data-intensive applications, and large-scale, network-attached storage (NAS), the amount of backup data once again began to outpace the ability of the old infrastructure to keep up.

"We had a robust tape library in the Quantum Scalar i500 that could scale up to an impressive capacity of 2.6PB," says Gerd Wiechers, The Mahr Group's head of IT. "But now we needed a new solution, which could, on the one hand, increase backup performance and reduce capacity requirements, and, on the other, dovetail easily into the existing infrastructure and make administration more efficient."

MOVING TO NEXT-GENERATION BACKUP WITH DEDUPLICATION
For its next-generation backup solution, The Mahr Group selected Quantum's DXi6700 Series deduplication appliance. The disk-based backup solution, along with the existing Scalar i500 tape library, has since become the foundation for the company's entire backup operation—providing fast performance and low administrative overhead.

"We have been working with Quantum for many years and cannot imagine a better provider in terms of service and support, in addition to the stability and robustness of their storage solutions."

Gerd Wiechers,
Head of IT, The Mahr Group

SOLUTION OVERVIEW

- Quantum DXi6700 Series deduplication appliance with 32TB capacity
- Symantec Backup Exec and Veeam Backup & Replication software
- Quantum Scalar i500 tape library with four LTO-5 drives

KEY BENEFITS

- DXi's deduplication reduces disk space required for backup data by 80% for lower overall costs
- High performance and scalable capacity provide effective protection for future data growth
- Reduction of backup time from 72 to 48 hours ensures that data protection does not impact production
- Fast integration—within one day—minimizes interruption and reduces administrative overhead
- Dedicated support and service ensures fast resolution of any issues

"Quantum has impressed us every time we have implemented a new solution because they have what we need and the installations have always been completed in just one day," says Wiechers. "This has helped the team meet their schedule and budget targets."

With the new system, the IT team was able to establish an optimal set of backup processes:

- Data from the virtual machines (VMs) is written to the DXi using Veeam Backup & Replication software.

- Data on the NAS system is written to the DXi using Symantec Backup Exec.

- Data on the DXi is written to the Scalar i500 tape library using a direct path-to-tape that does not send the data through the backup server.

- The backup of the databases is written directly to tape.

THE RESULTS: BETTER RELIABILITY AND LOWER COSTS

"For us, a key advantage is that the Scalar i500 makes our backup as reliable as pack mules," explains Wendt. The full 26TB backup—consisting of VMs, the NAS solution, and databases—takes place on the weekends. Furthermore, incremental backup of the VMs occurs daily, directly to the DXi6700. Veeam then takes a complete storage snapshot of the system once a week, which allows The Mahr Group to bring the VMs back online more quickly.

"When I think back to our beginnings with external tape drives, I realize that we have made a giant leap in our backup system using Quantum technology," says Wendt.

And this leap is quantifiable.

"If we assume that the time needed to manage our backup was 100% before, today we are down to just 15%, thanks to Quantum."

Not only has the backup window been reduced by a third, but the patented data deduplication of the DXi appliance has also dramatically reduced disk needs. An 80% reduction in data means that only 28TB of DXi capacity holds more than 160TB of data, contributing to significantly lower backup costs. Backups are also more reliable because the iLayer™ software in the Scalar i500 monitors itself using a built-in diagnostic system, so that backups and restores no longer fail.

TOP MARKS FOR TECHNICAL SUPPORT

Having a good backup solution is not enough if the manufacturer fails to provide effective support. The Mahr Group's IT team is enthusiastic about the expertise and after-sale service they have received from Quantum over the years.

"We have been building on Quantum for more than a decade. When it comes to personal contact and technical support, our team can think of nothing better," says Wiechers. "Quantum easily provides the best quality in terms of service."
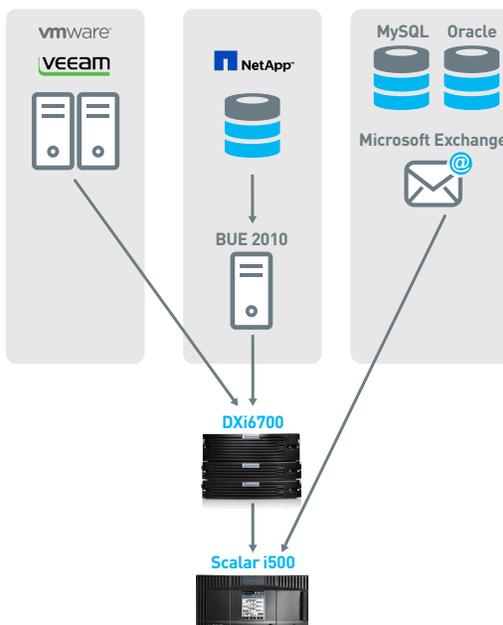
The Mahr Group IT team reports that Quantum engineers exhibit proactive attention to new updates, are always approachable for any questions, and resolve any issues quickly.

"When the administrative interface was not accessible on the DXi on one occasion, Quantum was able to correct the problem within a few hours," says Wiechers.

The Mahr Group plans to keep working with Quantum in the future.

"Only then we will be 100% certain that our backups will keep running smoothly," Wiechers and Wendt agree.

An upgrade project is already in the works—a capacity expansion of the DXi6700 from 32TB to 40TB.

"The Scalar i500 tape library and the DXi6700 deduplication appliance cope with the uncontrolled growth of our databases quite easily. Scalable, high-performance, and easy-to-use—they are the perfect storage solution."

Thomas Wendt,
Backup Administrator,
The Mahr Group

ABOUT THE MAHR GROUP

The Mahr Group is the world's third-largest manufacturer of production-measuring technology. Founded in 1861 in Esslingen, Germany, this medium-sized consortium of companies is the world leader in precision length metrology (PLM). The largest member of The Mahr Group is Carl Mahr Holding GmbH, based in Göttingen, Germany. Carl Mahr Group has subsidiaries in Europe, the Americas, and Asia with a total of 1,700 employees.

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