SCHOTT Schweiz AG protects the drug packaging supply chain

■ NetApp

NetApp ONTAP supports a healthy supply chain. Flash is a prescription for success.

Biotech research and vaccine production are in full swing to protect lives against diseases. Packaging is vital to make drugs safe and portable.

At SCHOTT, more than 18,000 employees strive to push glass to its limits and deliver innovations from development to shop floor. SCHOTT Schweiz AG, a subsidiary, is responsible for creating the gold standard for vaccine administration: borosilicate glass type 1.

The SCHOTT global supply chain generates huge data volumes, and NetApp helps make the data available to optimize pharmaceutical packaging for a healthier world.

SCHOTT
glass made of ideas

Everything under control

> "A 24/7 operation has no capacity reserve. NetApp solutions keep everything going and can recover data fast. That helps us meet delivery dates and strengthens the pharmaceutical supply chain."
>
> **Michael Schachinger**
> IT Location Manager, SCHOTT Schweiz AG

The global race for vaccines

More than 50 billion containers are made of borosilicate glass each year. But demand is soaring as more biotech drugs such as vaccines increase pressure on suppliers. Ramping up capacities is one thing. But detecting room for improvement along clocked supply chains requires insight created from data.

SCHOTT Schweiz AG in St. Gallen is one of the SCHOTT Group's largest production sites for pharmaceutical packaging. They cover all production steps, from borosilicate glass to syringes and carpules, and they even develop the production tools in house.

"Our aspiration is top quality. But business growth and speed, digital requirements, and corporate objectives made us find new ways to store, manage, and protect our data," said Michael Schachinger, IT location manager at SCHOTT Schweiz AG.

Michael Schachinger saw employee numbers in St. Gallen rise rapidly to more than 630, and the site was bursting at the seams. The production runs four shifts each day. Although the process is highly automated, many hands and eyes control product quality. The Good Manufacturing Practice (GMP) of the pharmaceutical industry rules all.

A single infrastructure for all data

The IT team discussed the situation with its partner Bechtle direct. The challenge was to gain one infrastructure for all data and meet Good Automated Manufacturing Practice (GAMP). IT systems with production data must be GAMP-certified. Even a seemingly trivial change like adding storage capacity triggers a new certification process.

"Bechtle shaped a GAMP-compliant solution using a clustered NetApp infrastructure. They put all our needs under one management umbrella right up to backup and disaster recovery. As production and enterprise data are physically separated, we save change processes," said Michael Schachinger. "Together, the Swiss and German Bechtle teams did a great job."

Deliver on time

The new infrastructure's speed and reliability are just what SCHOTT Schweiz AG needs to serve critical systems, from central SAP applications to the local Manufacturing Execution System (MES). It's the digital window to the shop floor for SCHOTT staff—and for clients to check online whether their orders meet their specifications.

According to Michael Schachinger, "MES data feeds daily business on site and within the group. In case it's not available, production can run into trouble. In the worst case, we lose output forever. A 24/7 operation has no capacity reserve. NetApp® solutions keep everything going and can recover data fast. That helps us meet delivery dates and strengthens the pharmaceutical supply chains."

Pushing the limits with data

SCHOTT scientists recently proved what is possible with good data when they investigated the strength of syringes and carpules. They used data simulation to detect critical crack points and increased glass strength in those spots with materials informatics. Reduced breakage keeps patients safe and saves precious medication at every stage, from mass bottling lines in production to injection during vaccination.

Creating value and optimizing processes are corporate goals. The local IT systems collect machine data for quality KPIs today. But innovating with machine learning and AI will require 1,000 to 10,000 times more data.

"Knowing the number of rejects is good. Systems that find failures on the fly and correct them by themselves are better. But this requires huge amounts of data and scalable, robust storage. With NetApp storage, we are well prepared and can quickly support new products and projects from our developers," Michael Schachinger said.

Health, compliance, and efficiency in a NetApp ONTAP package

NetApp AFF A220, FAS2750, and FAS2720 systems enable two NetApp ONTAP® clusters with six nodes across two sites. One cluster combines GAMP-certified hybrid storage for production data and all-flash storage for all other data. The second cluster serves as a backup and disaster recovery target only.

"NetApp data management is easy, and Bechtle direct is very supportive," said Michael Schachinger. "Bechtle direct is a strong partner. We need only basic storage management skills in house and trust Bechtle managed services for all the rest. In effect, we can run the whole NetApp environment from a home office."

Data and operations are well protected by ONTAP software. NetApp SnapVault® and NetApp SnapMirror® provide built-in backup and replication to support nonstop operations, allowing rapid recovery from scheduled maintenance or unexpected disaster.

NetApp Snapshot™ technology has changed backups fundamentally. Snapshot copies have increased the backup frequency from once a day to once an hour across all data. More backup copies and granular options solve restores in seconds and massively shorten recovery time objectives. Veeam software manages the ONTAP backup relations up to media disruption.

Meeting GMP regulations has become easy. NetApp SnapLock® software keeps data audit-proof and instantly accessible. Tape and bank safes are no longer used.

NetApp solutions are standard at SCHOTT Schweiz AG and within SCHOTT Group. The group IT is managed from Germany and uses NetApp data replications to integrate all sites into its central backup. The St. Gallen team gains additional data protection but stays self-sufficient thanks to its own business continuity setup.

The efficiency of NetApp storage goes beyond IT operations, adding to a healthier world.

"Glass production is a high-energy business, and SCHOTT aims for climate neutrality by 2030. NetApp storage needs less space and energy so that IT can contribute as well to our zero-carbon target," said Michael Schachinger.

NetApp Products
AFF A220
FAS2750
FAS2720
NetApp ONTAP
SnapLock
SnapMirror
Snapshot
SnapVault

NetApp Partner
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