

Severstal

Meeting the needs of a growing SAP environment with smart IBM storage

Overview

The need

As Severstal extends its SAP landscape, the data in its systems is growing rapidly. How could it build a fast, scalable new storage architecture—without ripping-and-replacing its existing systems?

The solution

Working with IBM, Severstal built a new tiered storage architecture that harnesses compression and virtualization technologies to run the SAP landscape on high-performance IBM® FlashSystem™ storage.

The benefit

SAP response speeds are twice as fast, and the salary calculation process has been accelerated from 12 hours to five. Compression frees up to 66 percent more space in the SAP environment.

Severstal is one of the world's leading vertically integrated steel and steel-related mining companies, with assets in Russia, Latvia, Ukraine, Poland, Italy and Liberia. It has approximately 61,000 employees, and generated revenues of USD13.31 billion in 2013.

Supporting strategic objectives with SAP

Over the past seven years, Severstal has built one of the largest SAP ERP environments in Russia, supporting operational processes such as planning, production and plant maintenance for both its mining and steel divisions.

The SAP landscape is constantly evolving to meet new business requirements. For example, this year, Severstal introduced SAP Advanced Planner and Optimizer for supply chain management, and SAP Mobile Platform to give employees anytime, anywhere access to SAP applications. Next year, it plans to introduce SAP Supplier Relationship Management too.

“The whole architecture that IBM proposed is just smarter than its competitors. Instead of just selling hardware, IBM focused on building a whole solution that re-uses our existing storage components and introduces new elements such as FlashSystem, allowing us to evolve flexibly as our business requirements grow and change,” says Yuriy Shekhovtsov, CIO at Severstal.



Solution components

Hardware

- IBM® FlashSystem™ V840
- IBM Real-time Compression Appliance™ STN7800
- IBM System Storage® SAN Volume Controller
- IBM XIV® Storage System

Software

- IBM Tivoli® Storage Manager
- SAP ERP

Services

- IBM STG Lab Services
-

Yet introducing these new functionalities, increasing the user-base and gaining deeper insight into operations all come at a price. The volume of data in the SAP environment was increasing rapidly, and performance was beginning to suffer.

How could Severstal design a storage landscape that would scale to meet its future needs? And in a period where budgets were tight, how could it avoid the expense of replacing all its existing storage systems?

Building a smarter storage infrastructure

After considering proposals from several vendors, Severstal decided to work with IBM to build a smarter storage landscape.

Yuriy Shekhovtsov, the company's CIO, explains: "We wanted a solution that could re-use our existing storage systems, while adding new high-performance components to meet the needs of our SAP applications. IBM provided a proposal that involved virtualizing and tiering the whole storage landscape, which was a much smarter approach. It gave us more flexibility at the same cost as the competition."

The solution uses IBM System Storage® SAN Volume Controller to create a single virtualized "pool" of storage, which includes Severstal's existing storage systems and also introduces the IBM FlashSystem V840.

Two IBM Real-time Compression Appliance™ solutions are used to compress the company's data during backup, freeing up 66 percent of the space previously used for SAP data, 63 percent for Oracle, 48 percent for VMware and 25 percent for the company's email system.

"The biggest impact of the new solution is the compression, because it has allowed us to move the entire SAP environment onto IBM FlashSystem storage—which means we get much higher performance," says Yuriy Shekhovtsov.

“One of the best features of IBM FlashSystem is IBM MicroLatency™, which cuts the access time for data from milliseconds to microseconds.... It has completely ended the discussion about SAP response times with our users.”

—Yuriy Shekhovtsov, CIO, Severstal

Using the right storage for the right workloads

The company’s existing disk storage systems, which include IBM Storwize® and IBM XIV® platforms, are now used to support other, non-SAP workloads, such as mail servers and the company’s large VMware environment.

IBM Tivoli® Storage Manager is used to manage the tiering of the storage landscape. It automatically moves older, less important or less frequently accessed files onto lower-cost, higher-capacity storage, as well as managing the company’s backups and restores.

Accelerating SAP performance with IBM FlashSystem

The IBM FlashSystem platform’s all-flash array provides extremely high throughput for the data-intensive workloads generated by Severstal’s SAP applications.

“One of the best features of IBM FlashSystem is IBM MicroLatency™, which cuts the access time for data from milliseconds to microseconds,” says Yuriy Shekhovtsov. “This means better response times for our SAP applications, which can in turn eliminate the need for us to optimize our ABAP code. It has completely ended the discussion about SAP response times with our users.”

Generally, the company has seen SAP response times cut by 50 percent as a result of the new flash storage and compression technologies.

Batch performance has also increased significantly—for example, the SAP process that calculates salaries for Severstal’s 61,000 employees, which used to take 12 hours, is now completed within just five hours.

Smarter storage for a more flexible future

Yuriy Shekhovtsov concludes: “In 12 months of operations, we have had zero problems with FlashSystem—our SAP users are happy with the performance, and our IT team has more time to focus on enhancing other areas of the infrastructure, as storage is no longer a bottleneck.”

“IBM has helped us build a smart storage landscape where all of the components can play the optimum role in supporting our business-critical systems. Virtualization, compression and tiering technologies give us the flexibility to make the most of the storage we already have, and only invest in new hardware when we really need it. This will help us match performance to the changing needs of the business, as our SAP landscape continues to grow.”

For more information

To learn more about IBM storage solutions, contact your IBM representative or IBM Business Partner, or visit the following website: ibm.com/storage



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