ifm Develops and Produces Solutions for Industry 4.0 with Nutanix

About ifm

Industry: Manufacturing
Employees: 9,055
Total group revenue: EUR 1.45 billion according to preliminary consolidated accounts
Location: Germany / Europe
Website: www.ifm.com
Applications

- Various Linux and Windows systems
- SAP ERP and other SAP applications
- SAP HANA
- Rancher Kubernetes
- Docker

Products:
- Files Storage
- Nutanix Cloud Infrastructure (NCI)
- Prism

Solutions:
- HPE GL

Ready to get Hands-On?

Take a Test Drive

The ifm group of companies has migrated important file services and business-critical applications to the Nutanix platform. Better performance, simple scalability, and optimum availability are advantages for the global market leader in automation and digitalization.

Overview

In order to accelerate innovation and support its global business with customers in 150 countries, ifm is in need of an agile IT strategy. With

Nutanix technology, the group of companies is now in a position to have flexible access to IT resources to implement new business requirements quickly.

Key Benefits

Performance without compromise
ifm uses the Nutanix platform to provide high-performance access to large amounts of data and latency-sensitive applications.

Ability to quickly adapt to growing needs
Thanks to easy scalability, IT can quickly expand the capacity of the environment to support new projects immediately.

Operational efficiency and high service quality
The Nutanix platform frees ifm's IT team from routine tasks and ensures reliable IT operations at all locations worldwide.

> **“During the implementation of the solutions, Nutanix also provided us with excellent support. Our contacts were always there when we needed them and took the time to listen to our concerns. The result is a future-proof infrastructure that perfectly supports our company's needs.”**
>
> **Daniel Trembich,**
> IT Administrator / System Engineer, ifm Group Services Gmbh

Challenge

Since its founding in 1969, the ifm group has been developing, producing, and selling sensors, controllers, software, and systems for industrial automation, supply chain management, and shop floor integration worldwide. As one of the pioneers in the field of Industry 4.0, the group of companies offers holistic solutions for the digitization of the entire value chain — from sensors to ERP. In doing so, ifm combines the flexibility and individuality of a family business with the quality and professionalism of a big corporation. Today, ifm has more than 9,000 employees and ranks among the world's leading automation and digitization companies.
The group of companies relies on innovation to consolidate and expand its market position. More than 1,530 employees work in research and development to solve tomorrow's challenges. More than 1,210 active patents and approximately 100 patent applications in 2023 are the result of this commitment. With the Moneo Software Suite, for example, ifm offers its customers great added value. The company's proprietary Industrial IoT (IIoT) platform uses sensor data from customer systems to increase machine availability, ensure process quality, and optimize energy consumption.
The development of innovative services and highly digitized production are also increasing the demands on IT at ifm: "We have to provide IT applications reliably around the clock at locations all over the world," says Daniel Trembich, IT Administrator and System Engineer at ifm. "Without our central SAP systems and the many production-related applications, our manufacturing operations would quickly grind to a halt. At the same time, we are being asked to implement new business offerings that often require additional IT resources on very short notice."
For example, ifm planned a new internal platform for storing and editing product videos and virtual demo sessions to support the work of its sales teams. IT needed to develop a solution architecture that could deliver high performance even for large, 4K-quality video files. "The first step was to store 100 terabytes of data on the platform," says Daniel Trembich.

Solution

IT managers at ifm compared two different options: a cloud storage solution based on Microsoft Azure and Nutanix Files Storage, a scale-out file storage solution that can be deployed in multiple clouds and on-premises environments.
The head-to-head comparison favored the Nutanix solution for several reasons: “In contrast to the cloud-only option, we were able to clearly calculate the costs for the required data volume — regardless of how often the data is accessed,” says Daniel Trembich. “In addition, Nutanix Files Storage gave us more flexibility in the maximum size of files and directories — and outstanding performance when handling large amounts of data. This allows our colleagues to edit video files directly on the file system without having to transfer them locally to their devices first.”
After the decision in favor of Nutanix, ifm implemented the first Files cluster based on three HPE nodes in its data center at the headquarters in Essen. The setup was straightforward, and the solution did not require a lot of administrative work during its operation. Right from the outset, the IT team appreciated the fact that, for example, authorizations could be adapted much more easily and quickly

than with classic Windows File servers. In addition, ifm quickly benefited from the solution's easy scalability. When the available data volume was exhausted, the team was able to double the capacity with the addition of two more nodes, virtually on the fly, while the system was in operation.

“Overall, the Nutanix platform has performed extremely well,” says Daniel Trembich. “As a result, we were able to quickly identify other use cases where Nutanix could help us. When the leasing contracts for our existing 3-tier infrastructure for running virtual machines expired, we gradually migrated the workloads to Nutanix Hyperconverged Infrastructure (HCI).”

In total, ifm now operates three Nutanix clusters for Linux systems, Microsoft Windows servers, and SAP applications in its data center in Essen, as well as two additional clusters for production-related applications in Tettnang/Bodensee, and Sibiu, Romania. Another Nutanix Files cluster is now also up and running in Tettnang. All locations use HPE ProLiant DX servers as the hardware platform.

Customer Outcome

Less complexity and administration effort

“By moving to Nutanix, we have dramatically reduced the complexity of our infrastructure,” says Daniel Trembich. “We can now manage and control all the components we need to run our business-critical applications from the centralized Nutanix Prism management interface. This ensures seamless interaction between computing, storage, networking, and virtualization technologies. When it comes to upgrades, the tedious process of checking software and firmware dependencies is no longer necessary because Nutanix Life Cycle Manager (LCM) automates the entire process and adds all required components to the upgrade workflow.”

Infrastructure updates can now be performed with a single click and on the fly, while users continue to work and have access to their business-critical applications. In addition, the Nutanix platform provides the ifm IT team with integrated tools to monitor the performance and availability of each component and workload. For example, team members can quickly identify and resolve bottlenecks before they affect the performance of latency-sensitive applications in a production environment.

High availability for business-critical applications

With the Nutanix platform, ifm is also achieving a higher level of availability than with the infrastructure it used previously. The inherently redundant HCI architecture can compensate for component failures and immediately make the affected workloads available from the remaining system resources. The Nutanix clusters in Essen and Tettnang are additionally secured using Metro Cluster technology. All data in the HCI infrastructure is synchronously replicated between two data centers in different fire zones, so that virtual applications would still be accessible in the event of a complete data center failure.

“The resilient system architecture helps us to meet the increased demands on the availability of our digital services,” says Daniel Trembich. “It's not just about ensuring our production runs reliably around the clock — the Nutanix platform also enables us to guarantee high service levels for external users. This could be important in the future when we offer our customers digital applications in a Software-as-a-Service (SaaS) model.”

Freedom of choice for a secure future

Although ifm currently runs the majority of its IT applications in its own data centers, the company is already considering moving certain workloads to the cloud in the future. With Nutanix, the company could also support a hybrid strategy and manage resources in the cloud and on-premises clusters from a single interface.

“We appreciate the freedom of choice that Nutanix gives us because it keeps all our options open, today and in the future,” says Daniel Trembich. When implementing the platform, it was important for the IT team to be able to continue working with their trusted hardware partner HPE and their existing virtualization solution from VMware. However, ifm is currently evaluating a possible transition to the Nutanix AHV hypervisor and is already looking at possible migration strategies. “We are definitely well positioned for the next evolutionary step,” concludes Daniel Trembich. “With AHV, we will be able to source another key component of our infrastructure from Nutanix, helping to further reduce the cost of our virtualization environment.”

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