LG Electronics is a global leader in terms of innovations in manufacturing TVs, refrigerators and washing machines. The company’s only European factory is located in Poland in Biskupice Podgórze, near Wrocław. Supporting these manufacturing efforts is a massive flow of information. Growing data stores were proving difficult to support and manage, so LG Electronics Wroclaw looked to Hitachi Data Systems for a solution. Thanks to Hitachi Unified Storage 130, the factory now safely stores its production data from its Oracle databases and has increased data accessibility levels.

LG Electronics Wrocław sp. z o.o.

INDUSTRY
Manufacturing: Electrical

SOLUTION
Modular Storage, Storage Management

HARDWARE
Hitachi Unified Storage 130

SOFTWARE
Hitachi Command Suite

SERVICES
Provided by Hitachi TrueNorth Partner Advatech

The Challenge: Support Continuous Data Analysis From the Production Lines

The production lines that take part in the manufacturing process at LG Electronics Wroclaw generate a lot of data. During the production process, each manufactured product is scanned multiple times in order to track the current production stage in the database and modify it in real time. Factory managers need access to information about the number of products in the production process, the time they left the production line, and so forth. All this data is transferred in real time to the database and stored on Hitachi storage.

Benefits at a Glance

- Guaranteed uninterrupted access to data.
- Expansion possibilities enabling unhindered company growth.
- Short and problem-free implementation.
- Ease of management and use.
- Automatic data migration between data carriers at various layers.
“The means of storing and protecting the data is a strategic decision,” says Mateusz Jaworski, IT Manager at LG Electronics Wrocław. “From the day the factory in Wrocław started operating, the management has ensured uninterrupted production, which partially depends on the mass storage systems.”

Hitachi storage systems have been present in LG Electronics Wrocław factory since its beginning in 2006. Initially, a Hitachi Adaptable Modular Storage (AMS) 1000 system was used: however, their lifetime was coming to an end. During the 6 years the AMS 1000 system was used, it was expanded to use all possible modules and disk shelves. In the meantime, the factory’s activity grew to include household appliances, which resulted in the increase of performed operations and data that had to be stored. It was necessary to buy a new, more efficient storage system, which could be covered with a new maintenance contract and ensure further expansion capabilities.

**The Solution: Migration in 3 Days? It is Possible!**

LG’s previous positive experience with using Hitachi storage induced IT representatives to choose Hitachi again. This time, the choice was made to purchase Hitachi Unified Storage 130, which was supplied by the Wrocław-based integration company and Hitachi TrueNorth Partner Advatech.

“Throughout the years that we have been using Hitachi disk storage, we formed a highly positive opinion about these products. We decided to continue this cooperation without hesitation,” says Mateusz Jaworski.

Hitachi Unified Storage (HUS) 100 family systems enable block, file and object storage on one centralized platform – without a negative impact on efficiency, scalability or cost-effectiveness. This unified architecture allows companies to develop and attain planned business goals, simultaneously simplifying the day-to-day usage and reducing the current expenditures as well as easily adapting to the changing business needs.

The implementation of Hitachi Command Suite software within HUS 130 made data structure optimization possible. HUS 130 also ensures operational reliability, with data access availability levels at 99.999%. This operational reliability was acquired by means of full redundancy of all active components, the possibility to replace them when the system is running, and intelligent data protection making use of dynamic virtual controllers. Hitachi storage systems are also known for their flexibility of usage, ease of management and low expansion costs. With Hitachi Command Suite and HUS, the LG users also get a set of tools for data backup, data restoration, data integrity analysis and reduction of business risk connected with lack of access to company-owned information.

“Data migration between 2 storage systems operating in a production environment can be a very difficult task,” stresses Mateusz Jaworski. “However, in our case, the migration process was really well planned and executed. Everything was performed without the need to stop the production line, and the migration itself lasted only 3 days.”

During the process, both disk storage systems were connected to the server environment and data was transferred, with production carried out simultaneously. (Current information was stored on both storage systems at the same time, and copied concurrently with that historical data.) After all data had been transferred and synchronized, the old disk storage system was simply removed.

**Efficiency for Years**

The dynamic growth of the factory located near Wrocław requires the agility to quickly supply capacity. Due to this, Hitachi Unified Storage 130 was purchased with certain capabilities in mind, both in terms of efficiency and disk capacity.

Disk storage from Hitachi Unified Storage 100 family is scalable up to 3PB, with efficiency and performance that grow in line with their capacity, attaining values close to those of larger enterprise storage systems.
The HUS systems can store up to 256TB of single-file data, and up to 128TB of block data. Plus, they enable automatic tiering, provide automatic data migration between different storage levels, and ensure simultaneous access to both blocks and files. HUS competitive pricing also makes it one of the most cost-effective midrange systems in the market.

“The biggest success of this project was the amount of time it took to conduct the migration process,” Mateusz Jaworski recalls. “The integration company that cooperated with us prepared the migration scenario solidly and conducted the appropriate tests. The ease of use of the disk array made it possible to prepare the entire environment and run the previously written scripts without any problems. In general, everything was executed automatically, but of course under our supervision.”

The LG Electronics Wroclaw-owned storage is equipped with disk capacity that should suffice for 2 years. After this time, the purchase of another disk shelf is planned. The storage area network, which is connected to HUS 130, ensures the appropriate connectivity and redundancy to the servers.

Mateusz Jaworski is pleased with the attained capacity expansion possibilities and efficiency. “The disk capacity in the storage system that we purchased equals approximately 10TB, and about 60% is in use. All our historical data are stored there as well, so we are witnessing a constant data growth,” he explains.

Currently, the IT division of LG Electronics Wroclaw independently manages the configuration of Hitachi Unified Storage 130 and the stored data. The purchased maintenance package guarantees fast repair of potential defects, even though, as the IT representatives highlight, they have never occurred in this or the previous storage systems.

LG Electronics Innovates With Information

- Hitachi storage systems are critical to enabling LG Electronics to view data from production lines. Without this data, it would be impossible for the company to evaluate and analyze production.
- Uninterrupted access to data allows more cost-effective production planning and better use of available resources.

Innovation is the engine of change, and information is its fuel. Innovate intelligently to lead your market, grow your company, and change the world. Manage your information with Hitachi Data Systems.

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