Hitachi Zosen: Building an IoT platform in one month with HULFT Integrate

How data integration empowers corporate sustainability

Initially founded as Osaka Iron Works by Mr. E.H. Hunter in 1881, Hitachi Zosen creates earth-sustainable products that range from energy-from-waste plants and water treatment facilities for the environmental plant business to energy-efficient marine engines and presses for the machinery business and facilities such as shield machines and bridges as part of the social infrastructure business.

To further achieve its sustainability and recycling goals, Hitachi Zosen committed to focusing on products related to energy and water. Part of the effort involved creating the Hitz Advanced Information Technology Center, which spearheads activities for remote monitoring of equipment assets and infrastructure using IoT technology and extensive data analysis of environmental plants, machinery, and social infrastructure.

The IoT monitoring and data collection performed at Hitz can monitor a variety of equipment assets and infrastructures from many diverse industries, platforms, and applications. However, to facilitate this monitoring, Hitachi Zosen needed a data processing and integration software solution that could collect and process IoT data from a multitude of sources, applications, and industries.

Hitachi Zosen's IoT System Section went back to the drawing board with an evaluation of several other ETL tools.

"HULFT Integrate allows data processing to be implemented with no programming required," said Mr. Yamada. "This was very attractive because it eliminated the need for us to do this programming ourselves. HULFT Integrate was also able to fill the role of the type of simple and straightforward data processing platform we had in mind, because it provided very intuitive GUI-driven operations."

For Hitachi Zosen, real time data collection was critical and HULFT Integrate made it easy because it supported AWS and also provided many triggers for data collection and publication.

Customer Highlights

01 The creation of a scalable IoT platform in just one month

02 Data processing without programming knowledge through an intuitive GUI

03 Ability to store data in different formats without a heavy burden on IT

"We were also impressed with the abundance of different data script trigger functions that HULFT Integrate offered," said Mr. Yamada. *"These functions gave us enormous flexibility in our data operations. For example, we could execute a script when a file was stored in a designated folder, and still maintain a high degree of compatibility with AWS."*

HULFT Integrate provides flexibility and supports different data formats

The processing of IoT data that Hitachi Zosen collects begins with hundreds of data items sent to AWS via a gateway integrated with a programmable logic controller (PLC). The PLC controls filtration devices called filter presses that Hitachi Zosen manufactures. From here, the data is sent to HULFT Integrate, which organizes it in formats appropriate for the systems (e.g., Amazon S3, Amazon RDS) with which it interfaces.

As part of the process, Hitachi Zosen also uses a mechanism that sends urgent data, such as alerts, directly from HULFT Integrate to data visualization tools and to system administrators.

"What truly enhanced our operation was the fact that we were able to use HULFT Integrate to store data in different formats that were created and updated at different times and on different schedules, without a heavy burden on the people in charge," said Jun Yokota of Hitachi Zosen's IoT System Section. This efficiency gave us the confidence to handle our data operations effectively.

*HULFT Integrate is sold in the U.S. and is available in other countries under the brand DataSpider Servista

"Even when monitoring the same machine, the sensor data varies for each customer. Thanks to the adaptability of HULFT Integrate, we can flexibly handle this data by only specifying settings, even in environments that differ from one another. This reassures us that our data operations are in good hands. We could not have constructed such a mechanism in such a short time if we had done the work manually," said Yokota.

Using HULFT Integrate, Hitachi Zosen could construct its IoT and analytics platform in only one month. "HULFT Integrate was extremely easy to use, and it didn't have a steep learning curve," added Yokota. "We were able to complete the project quickly. We also discovered that the product could be used to specify data settings without any dependencies or requirements to customize settings for the assortment of work environments that we operate in."

Hitachi Zosen's project team also found that using HULFT Integrate's specification-document creation function, scripts, icons, and variables could be reused throughout the project. This eliminated repetitive "do-over" processes and reduced the risk of introducing errors.

"It is always advantageous when you can reduce the number of tasks in a project that depends on the skills of specific individuals," said Yokota. "It also makes it easier for our employees to pass responsibilities to their successors."

Skills transfer is further facilitated by the many sample scenarios that HULFT Integrate provides for specifying settings. "The sample scenarios are helpful because they make it easier to gain a clear idea of the processing, especially when you are performing these tasks for the first time," said Yokota.

Future platform evolution

"HULFT Integrate's flexibility gives us the potential to create new avenues of added business value for our customers and ourselves," said Yamada. "By using HULFT Integrate as a key element of our IoT platform, we will be able to integrate new types of mission-critical system data such as maintenance data and parts inventory information. In this environment, advanced processing will be necessary to perform data analysis. We expect to be able to utilize HULFT Integrate for that as well."

About HULFT Integrate

HULFT Integrate is an automated, no-code data integration solution that takes actionable data and delivers it into a business application, intelligence tool, or workflow to achieve better business outcomes. It eliminates error-prone, time-consuming, productivity-sapping manual integration processes.

It is securely compatible with all major data destinations through hundreds of diverse connectors. Whereas most data extraction tools require significant manual interaction such as uploading the file, waiting for results, downloading the data, and then manipulating it to the right format, HULFT Integrate connects that data to any internal or external database directly.

HULFT Integrate is part of a broader solutions portfolio: HULFT Data Capture, which leverages leading OCR technologies to help customers extract and validate critical data; and HULFT Transfer, the most time-tested managed file transfer solution on the market today. Together, Saison Technology provides a one-stop-shop to take businesses from data disparity to data dominance.

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