AVEVA

Two systems, no headaches: Genentech migrates from legacy solution to AVEVA™ PI System™

Genentech - www.gene.com
Industry - Manufacturing, Life sciences
Partner - RoviSys

Goals

- Migrate over 20 years' worth of continuous and batch data from a legacy historian to AVEVA PI System

- Migrate custom tools critical to the manufacturing process as well

Challenges

- Genentech could not experience any downtime during the integration

- Legacy tags had to be mapped to AVEVA PI System tags for Genentech's custom tools to work properly

Results

- Successfully moved 130 billion events across 27,000 AVEVA PI System tags

- The new system is more stable, takes up less space, integrates with the rest of the enterprise, and provides a single source of truth for users

Solutions

- AVEVA PI System

- AVEVA™ PI Vision™

Few data projects are more daunting than moving data on a large scale from one software system to another. Genentech had over 20 years' worth of data in a legacy system that tracked operations at its large San Francisco campus. The company faced a pressing need to integrate data with its corporate parent.

Working with RoviSys, a control-system integrator and partner, Genentech used a custom application with AVEVA PI System's asset framework software-development kit to migrate and validate billions of process and batch data points, as well as a series of tools developed over the years to support operations.

The migration challenge

Founded in 1975, Genentech was one of the earliest pioneers in the biotech industry. Today, the company employs over 13,500 people and has more than 40 drugs on the market, including the first targeted antibody for cancer and the first drug to treat primary progressive multiple sclerosis.

In the Roche company, Genentech's parent company, Genentech was the only one of 27 plants not using AVEVA PI System as a data historian. The need to integrate data across the entire enterprise was becoming more pressing, but the project was daunting.

Over 20 years of data spanning more than 75,000 tags had to be migrated to the new system, along with over 1,000 users who needed training in AVEVA PI System. One of the biggest challenges was migrating a suite of custom tools developed over the years that had become integrated into Genentech's manufacturing processes. And the entire migration process had to be seamless.

"We were not going to be able to take downtime to do this migration," said April Phillips, a senior engineer at Genentech. "We had to do it as live as we possibly could."

Making use of the enterprise agreement

The first step in the project was to collect data in parallel between AVEVA PI System and Genentech's legacy system. RoviSys worked with Genentech to map legacy tags onto AVEVA PI System tags so that the two historian systems were both using the same data structure. Once simultaneous data collection was underway and running smoothly, RoviSys shifted archive functions to AVEVA PI System.

With AVEVA PI System handling all the old legacy system's data tasks, the engineers then needed to migrate the old archive into the new system.

"We actually stood up an intermediate PI System that we were able to spin up with another license via the enterprise agreement," said Zack Wagner, a project engineer at RoviSys. "That allowed us to do all of our data migration on an intermediate system rather than the live production system."

RoviSys used a custom-built application with the AVEVA PI System software development kit to write data from the legacy historian to the intermediate AVEVA™ PI Server. By running multiple instances of the application in parallel, engineers could speed up the process, achieving between 50,000 and 60,000 writes per second.

"We had more than 20 years' worth of data that had to be moved over, and, being in a regulated industry, we needed to be able to prove that we were moving this with 100% data integrity."
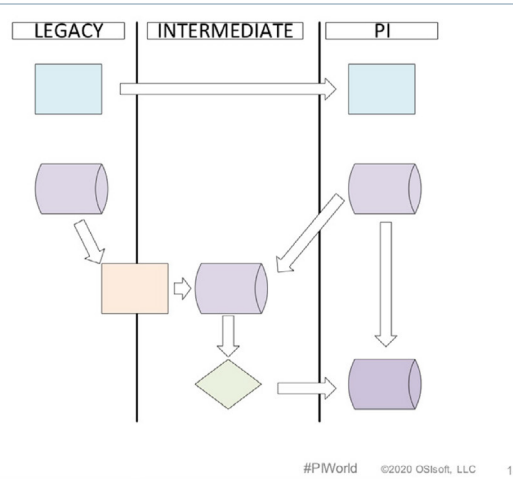
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April Phillips
Senior Engineer, Genentech

"We were able to move 130 billion events across 27,000 AVEVA PI System tags pretty efficiently using this tool," Wagner said.

Bringing the data into the live system was relatively simple once the migration process was complete and the system validated it.

"When we had finished doing the migration, we were able to just register the archives, and you could see all the historical data without having to do archive remapping," Wagner said.

To migrate Genentech's historical data from a legacy system, consultant RoviSys used two AVEVA PI System installations, migrating and validating data in an intermediate system before registering it to the live server

Moving forward: The power of PI

With the migration from the legacy system now complete, Genentech is tapping into the power of AVEVA PI System as a data architecture. The new system is taking up less storage space and is more stable during network outages.

The company is using AVEVA PI Vision as its primary tool for giving users intuitive, visual access to data, and it has been a boon to user training and greater data usability. AVEVA PI System is making it easier for Genentech to support users.

"Having access to all the data with one tool has been a huge benefit to our users," Phillips said.

For more information about AVEVA PI System, please **click here.**

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