Accenture: Using cloud-based condition monitoring and advanced analytics to better serve customers

Accenture - accenture.com
Industry - Consulting

Challenges

- Laying the groundwork for autonomous operations required a new approach to asset performance monitoring

- Existing monitoring solutions were time-consuming to deploy

- Lack of cloud-based advanced analytics thwarted deeper insights

Solution

- Integrated existing AVEVA™ PI Servers with CONNECT data services and AVEVA™ Advanced Analytics to create a cloud-native solution that can monitor asset performance, enable digital twins, and allow users to perform advanced analytics from any location

Results

- A secure, scalable asset monitoring platform that allows teams anywhere to view AVEVA PI Server data and perform advanced analytics in the cloud

- New revenue opportunities for Accenture to monitor clients' asset performance and offer consulting services to mitigate issues and optimize operations

- Possible applications using advanced analytics and GenAI to streamline troubleshooting and asset maintenance

AVEVA

POWERED BY
CONNECT

Accenture, a consulting firm and Global Fortune 500 company, has been a trusted partner of AVEVA for over ten years, helping its customers get the most out of their AVEVA software. Through this partnership, Accenture empowers organizations to harness the value of digital transformation in industrial operations across engineering, operations, and the asset lifecycle.

As AVEVA phased out its managed network operation center service (NOC), Accenture saw an opportunity to provide the kind of support and facilitation NOC customers might need to optimize their AVEVA solutions. As part of a pilot program, Accenture assessed the integration of AVEVA's suite of cloud-based solutions, including data services and advanced analytics, with Accenture's own AVEVA PI Servers before launching a NOC-replacement service to customers. In doing so, Accenture hoped to further evolve and enhance its service, to help customers optimize their digital investment.

Laying the groundwork with CONNECT

Accenture is not only an AVEVA PI System integration and support provider. It also operates three of its own AVEVA PI Servers. It uses these systems to provide demos, training and accreditation for AVEVA PI System customers, as well as support proofs of concept for sales opportunities.

Due to the native integration between AVEVA PI System and the CONNECT industrial intelligence platform, Accenture opted to use these solutions as the basis for piloting its asset monitoring platform. CONNECT data services enables users to aggregate, contextualize, and share real-time data from anywhere. Using AVEVA Advanced Analytics on top of CONNECT data services, Accenture took full advantage of deep machine learning and AI-based advanced analytics to create a more scalable, cloud-native monitoring platform.

Accenture reproduced the analytics previously included in the NOC service with analytics in AVEVA Advanced Analytics, so users had the same anomaly detection capabilities — but the setup process was much faster. The team was able to build the entire platform using existing AVEVA PI System integrators — which was convenient, as that's what they had on hand.

"I did not have to go get a bunch of data scientists or coders or anything else," noted Zev Arnold, Principal Director at Accenture. Along with the full set of analytics Arnold and his team rebuilt in AVEVA Advanced Analytics, they also built a series of monitoring screens that show the results of the relevant pilot KPIs.

_____

"If you're not taking action off your data, you're not getting any value off your data."

-
Zev Arnold
Principal Director, Industrial IoT, Accenture

## Advanced analytics and GenAI lead to streamlined asset monitoring

After transferring contextualized data from AVEVA PI Servers to CONNECT and building a list of KPIs that tell the user if anything's wrong, the team then began to experiment with exposing this system to a large language model (LLM). They pulled out the asset hierarchy and the values and used the LLM to create a chatbot. The chatbot allows users to converse with their AVEVA PI Server about the health of their assets. For example, a user might ask the chatbot to identify any issues with particularly critical assets within a facility, and the user would then receive a list of those critical assets and potential issues. Or a user might ask about the primary reasons for deficits in facility production, and the AVEVA PI System chatbot would provide these reasons. This kind of targeted intelligence streamlines asset health monitoring and troubleshooting, allowing customers to focus on solving problems and innovating rather than wasting time trying to pinpoint the problem.

One thing Arnold and his team encounter over and over again in talking to customers about industrial data solutions is concern over the reliability of their data. They might see a trend or an outlier but can't be sure if the data is corrupted, which means they must take valuable time to verify data instead of addressing the issue. And as Arnold says, "If you're not taking action off your data, you're not getting any value off your data." This AVEVA PI System chatbot could potentially help end users who do not want to open a support ticket with IT just because they have a question about the reliability of their data.

"CONNECT allows for industrial asset data management at scale, fluid integration with AVEVA PI System, and the analytics power of AVEVA Advanced Analytics. Accenture's Asset Monitoring Platform, powered by AVEVA PI System, CONNECT data services and AVEVA Advanced Analytics, provides greater scale and deeper insights than previous approaches and is a natural evolution from the retiring AVEVA NOC service."

-
Zev Arnold
Principal Director, industrial IoT, Accenture
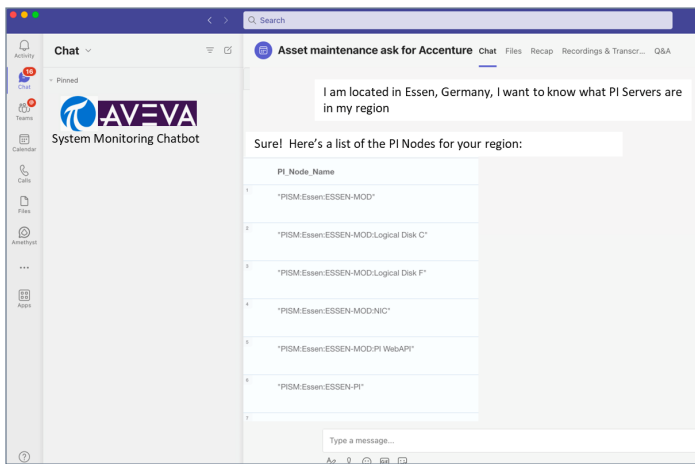
The chatbot allows users to converse with their AVEVA PI Server about the health of their assets

Citation:

Arnold, Zev. Accenture: Unlocking the power of AIOps for IIoT with CONNECT data services and AVEVA Advanced Analytics" resources.osisoft.com/ presentations/accenture--unlocking-the-power-of- aiops-for-iiot-with-aveva%E2%84%A2-data-hub-and- aveva%E2%84%A2-advanced-analytics
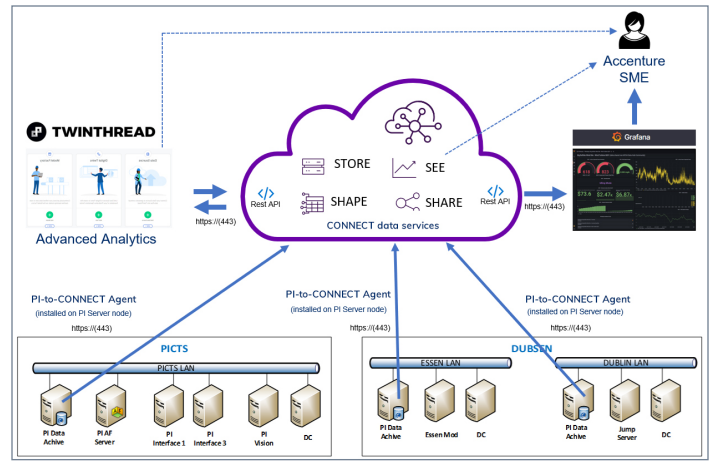
CONNECT data services connects Accenture's AVEVA PI Servers

The future of the Accenture monitoring platform

Accenture is excited about the potential future capabilities of the chatbot technology and is interested in commercializing it in the near future. Another area the Accenture team is looking at is using AVEVA Advanced Analytics to create better, more accurate KPIs from the data in AVEVA PI Server, as the GenAI is only as good as the underlying data and context.

Given the success of its internal pilot, Accenture will roll out its asset monitoring platform and other data science services, such as dashboards and reporting, so its team can monitor client assets. With CONNECT and AVEVA Advanced Analytics, Accenture can now support and facilitate comprehensive cloud-based anomaly detection and advanced analytics in the cloud—a faster, simpler, and more powerful solution to replace the old NOC.

Thanks to Accenture's innovation and AVEVA products, Accenture clients are one step closer to achieving end-to-end autonomous operations.

Watch the full presentation