HighByte

HighByte Intelligence Hub: Industrial DataOps at the Edge

Challenges

Existing data architectures cannot support Industry 4.0 use cases

Industry 4.0 has dramatically increased the number of users and systems that want access to industrial data. Unfortunately, controls data lacks context and uniformity and is not correlated for use outside of process control. Many bespoke, disconnected systems also have valuable context for analytics. Writing and maintaining custom integration code, preparing data, and redundantly modeling data in each end-application is time consuming. Early-stage wins often lead to larger projects that stall or fail to scale because the organization's data architecture cannot support the increasing complexity. This leaves many CIOs struggling to get usable industrial data to drive analytics for the business.

The HighByte Solution

HighByte Intelligence Hub provides the critical data infrastructure required for scale

HighByte Intelligence Hub is an Industrial DataOps solution purpose-built to model and manage machine, transactional, and time series data at the Edge. The software enables manufacturers to securely connect, merge, model, and flow valuable industrial data to and from AWS cloud services without writing or maintaining code. With the Intelligence Hub, users can speed system integration time, rapidly leverage contextualized data for analytics, AI, and ML applications, and govern data standards across the enterprise. HighByte Intelligence Hub provides the critical data infrastructure required to scale Industry 4.0 projects beyond pilot to enterprise-wide deployment.

Benefits

HighByte Intelligence Hub enables plant floor engineers to securely connect, merge, model, and flow industrial data to AWS cloud services without writing or maintaining code.

Scalability

Build a data infrastructure designed for multi-site scalability and govern data standards across the enterprise.

Performance

Drive manufacturing performance, quality, productivity, and waste reduction with curated, modeled data for advanced analytics.

Time

Reduce time to deploy and maintain system integrations and accelerate data preparation for analytics and other business systems.

HighByte
on AWS

HighByte Intelligence Hub is the Edge-native DataOps solution built for industrial data. The Intelligence Hub enables manufacturers to securely connect, merge, model, and flow industrial data to analytics and enterprise systems on AWS without writing or maintaining code.

The Intelligence Hub seamlessly publishes industrial data to many AWS services. Run the application at the Edge to bridge the gap between Operational Technology (OT) and Information Technology (IT) teams and systems. Once deployed on-premises, OT users can easily contextualize and integrate industrial information across many systems and maintain these integrations throughout the life of the factory.

GP Georgia-Pacific

Case Study:
Georgia-Pacific LLC

⫸ Challenges
The Manufacturing IT team at Georgia-Pacific needed to aggregate quality and asset data to predict issues prior to machine or process failure. They were challenged with remotely deploying in local plants through the corporate team and systems.

⫸ Solution
Using HighByte Intelligence Hub, the team was able to standardize information modeling across similar assets in multiple plants. They used the Intelligence Hub to standardize and contextualize data so it could be used in a consolidated data lake by remote employees.

⫸ Results
The Intelligence Hub enabled Georgia-Pacific to achieve a digital plant with contextualized data to support the corporate data lake. The Intelligence Hub continues to provide an easily maintainable solution able to adapt to evolving business needs across 20+ sites.

Features

Native Connectivity
Consume both real-time and asset model data from a variety of edge data sources, including machine data, transactional data, time series (historical) data, and AWS IoT Greengrass. Publish data over a variety of outbound connections, including native connections to AWS IoT SiteWise, Amazon Kinesis Data Streams, and Amazon Kinesis Data Firehose.

Data Modeling
Build asset models within the Intelligence Hub's editor to merge and contextualize data for AWS services. Deploy the model directly to AWS IoT SiteWise along with the streaming data to calculate and visualize metrics from telemetry data using AWS IoT SiteWise Monitor.

Bi-Directional Data Flow
Route asset models to multiple output connectors, each with different frequency. Connect bi-directionally to AWS IoT Core and AWS IoT Greengrass through the MQTT connector to consume data from the Cloud and publish modeled information back to on-premises systems.

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