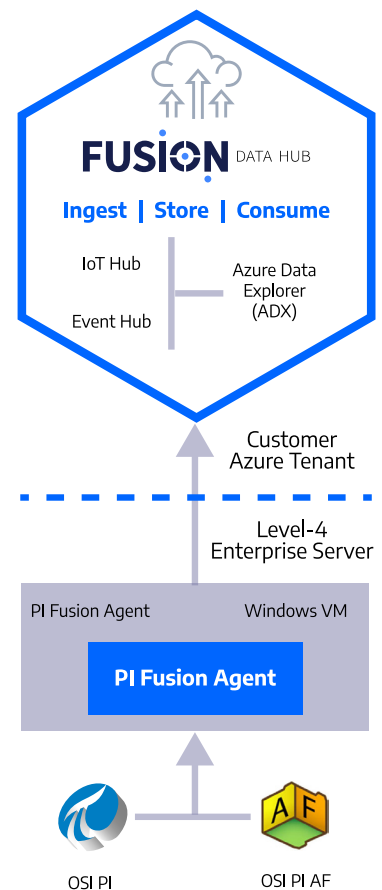**FUSION** DATA HUB

Midstream Energy Company Accelerates Digital Strategy with Fusion

Overview

One of the world's leading integrated energy companies is engaged in The energy market is at a critical tipping point as the push for clean energy and economic instability wreak havoc on the old ways of operating. Those who hope to thrive in the new environment must accelerate their digital strategies. This Fortune 500 midstream energy company (whose core business is natural gas processing and transportation, with petroleum and electricity generation assets) was committed to doing just that, but their operational technology (OT) data infrastructure stood in the way.

» A custom script had been written to export data from their OSI PI system into an on-premise database, but keeping this custom pipeline configured for new data and demand has been challenging. They needed a more sustainable way to move OT historical and real-time data into an open, centralized location in the cloud that would feed their sustainability reports, and drive other business critical analytics.

» The solution had to scale, ensuring data, data models, hierarchies, history and event windows, transported without error prone manual intervention and using specific scripts.

» As critical infrastructure, moving from an on-premise to cloud architecture couldn't introduce new cyber security risk, and the data had to be in a dedicated cloud under their control.

FUSION DATA HUB

Ingest | Store | Consume

IoT Hub

Event Hub

Azure Data Explorer (ADX)

Customer Azure Tenant

Level-4 Enterprise Server

PI Fusion Agent   Windows VM

PI Fusion Agent

OSI PI   OSI PI AF

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FUSION DATA HUB

Solution: Multi-Station Pilot

This energy company's historian administrator and IT support staff were being inundated with requests and the ever-growing need for data. Their custom script exporting data via CSV files wasn't designed for the scale of data requested or the increasing number of requests they were receiving. For every request they fulfilled, another would follow asking for different context, more history or new tags. The list continued to grow as did the frustration.

Within a couple of days, Fusion was installed by the internal customer team. The Proof of Value (POV) deployment focused on OSI PI data, but would serve as a test for a broader data strategy they would implement in the future. The immediate use case focused on automating delivery of data to Azure Data Explorer (ADX) for use in publishing Environmental, Sustainability & Governance (ESG) reports that were critical to their business strategy. Once the data was available in the cloud, Power BI was used to publish reports and enable delivery of data to 3rd party data consumers.

No matter what requests surfaced, the POV deployment proved the necessary data including years of historical data and all its relevant context was ready and waiting conveniently. It was now possible to easily map data coming from OSI PI model to the enterprise hierarchy, joining information from time series data to batch historical information. With this new data fabric they were able to fully encapsulate everything related to a particular asset – SAP work orders, safety reports, real-time sensor feed and other related documents.

While it was impossible to predict all future analytic needs, Fusion fed a flexible architecture that stood ready for new requirements. The entire customer team had growing confidence in the quality insights they were generating with the new ADX data store.

Results: Mission Accomplished

Their POV deployment proved that Fusion could be the flexible and adaptive backbone of their digital strategies. In less than one week, Fusion was installed and ready to evolve with their data architecture. It provided a sustainable capability to move, store, and access operational technology (OT) data in an ADX cloud environment rapidly, cost-effectively, and securely.

Complete, secure and timely movement of OSI PI data to Azure with OSI PI-AF (Asset Framework) model for context:

» 800,000+ tags imported

» Data history ingested on-demand

» Real-time time-series updates at over 10,000 events/second maintained

» Queries using ADX query language returned expected results without disruption

» Self-service data access reduced administrative burden on IT

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We would love to show you how Fusion Data Hub removes operational technology (OT) data constraints to help your organization achieve industrial intelligence.

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