

Optimizing Midstream Pipeline Systems with Cloud Data Platforms

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February 2025
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The Power of Data in Midstream Operations

At Streamline Control, we know that optimizing midstream pipeline operations is about making data work smarter. The midstream sector is complex, with countless variables affecting efficiency, safety, and profitability. Traditional SCADA systems provide valuable insights, but they often operate in silos, making it difficult to leverage data in a meaningful, integrated way.

The Streamline Approach

We've seen firsthand how cloud data platforms can transform midstream operations. By moving real-time and historical data into a centralized system, companies can unlock predictive analytics, automate decision-making, and improve overall efficiency. Our approach focuses on delivering solutions that not only enhance visibility but also drive actionable insights—so you can make faster, smarter decisions.

Why Move Data to a Cloud Data Platform?

We believe that data should work for you—not against you. Migrating to a cloud data platform creates a single source of truth across your operations, making it easier to track, analyze, and optimize every aspect of your pipeline system. With real-time data integration, you can gain a clear picture of what's happening at any given moment and use that information to drive better decisions. Cloud data platforms also provide advanced machine learning and AI tools, and simplified integration to all other areas of your business.

Why MQTT/Sparkplug?

When it comes to real-time data transmission, not all protocols are created equal. We use MQTT/Sparkplug because it's lightweight, efficient, and built for industrial applications. Unlike traditional polling-based systems, MQTT/Sparkplug ensures that data is transmitted only when it changes—reducing bandwidth usage while improving responsiveness. It does so while maintaining a higher degree of reliability and cybersecurity.

How We Deliver: A Smart, Connected Architecture

Streamline designs solutions that bridge the gap between operational technology (OT) and enterprise IT. Our architecture integrates data across different layers, from field devices to enterprise applications, ensuring that you get a unified view of your operations.

For midstream companies, this means real-time optimization of oil movements based on forecasts of receipts, and nominations. Our approach allows operators to enter nominations data by meter, compare nominations and actuals to forecasts, and optimize flows dynamically. By incorporating machine learning and prescriptive analytics, we help companies anticipate tank levels, optimize flow rates, and reduce pressure cycles—giving them the tools to optimize scheduling and resource allocation.

Turning Data into Action

We've seen how cloud-driven optimization can revolutionize midstream operations. Through our solutions, companies can:

- Improve forecasting accuracy by integrating historical and real-time data.
- Automate daily flow recommendations to ensure operational efficiency.
- Reduce manual intervention by streamlining scheduling and inventory management.
- Track tank levels, pump statuses, and pipeline flows with real-time visibility.

By combining advanced analytics with a robust cloud architecture, we empower operators to make proactive decisions—reducing inefficiencies and maximizing throughput.

What We've Seen Work

From our experience, we've learned that success in cloud transformation is about strategy. Companies that take an incremental approach, focusing on quick wins and scalable solutions, see the best results.

We often recommend starting with a quick win through operational reporting—getting real-time data from the source and removing unnecessary complexity. Avoid vendor lock-in by using open standards and common-sense mapping techniques. Most importantly, embrace a mindset of continuous improvement. The midstream industry is evolving, and the companies that adapt fastest will gain the competitive edge.

The Future of Midstream Optimization

At Streamline Control, we're committed to helping midstream companies harness the power of data. By embracing cloud platforms, modern data protocols, and intelligent optimization applications, we help our clients stay ahead of the curve.

If you're ready to transform the way you manage your pipeline operations, we're here to help. Let's start the conversation.

Contact

For further information on Streamline's industrial analytics services, please contact Dan Lozie, Director of Analytics & Machine Learning, at dan.lozie@streamlinecontrol.com.