

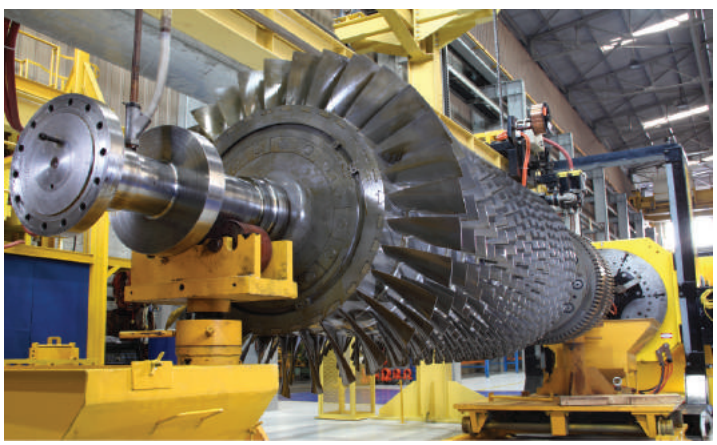
ADLINK Edge Success Story

Creating New Aftermarket Services with Edge IoT for Gas Turbines

A gas turbine manufacturer leveraged ADLINK's Edge IoT smart solution Historian Connect to determine root-cause analysis on turbine start-up failures. Creating value from the real-time computing of OSI® PI System® data, cloud analytics, and raw turbine sensor data at the edge

Turbine Start-up Failures

When it comes to the infrastructure behind large and complex machinery like gas turbines, a historian or database is traditionally involved. Like many who manufacture low volume and high cost machinery, a gas turbine manufacturer was struggling to find the root-cause of turbine start up failures by sifting through historical data. Sifting through PI System data exported into an excel workbook when failures occurred was extremely time consuming on the engineering team. Although the turbine manufacture was using cloud analytics, no real-time connectivity and computing was occurring so very little value was being generated from the historical turbine data. With long lifecycles, the turbine manufacture was also trying to find new ways to generate new revenue with turbines already installed at customer sites.



ADLINK Unlocks Historian Data

By leveraging ADLINK's Edge IoT smart solution Historian Connect, the turbine manufacturer was able to determine root-cause analysis of turbine start up failures in real-time. The company is using ADLINK's rugged intelligent gateway combined with ADLINK's real-time data streaming software pre-architected for connectivity to OSI® PI System®. Historian connect is combining and computing raw turbine sensor data, PI System data, and cloud analytics simultaneously at the edge for real-time root-cause analysis of turbine start-up failures. By enabling the remote monitoring of brownfield turbines already installed at customer sites, the company is also now able to offer new post-sale services by remotely monitoring turbine health as well. With real-time data streaming on the ADLINK Edge Data River™, the turbine manufacturer has a holistic view of all turbines that are connected.

ADLINK® Leading EDGE COMPUTING

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Value

The turbine manufacturer is now able to offer new post-sales services to customers creating a new source of revenue, decrease maintenance costs associated with manufacturing the turbines, and more responsive maintenance service providing higher quality customer service. The turbine manufacturer is also receiving a greater return on their PI System data.

Benefits

- Real-time root/cause analysis and visualization
- Fusion of cloud analytics, OSI PI System data and raw turbine data increase ROI
- Predictive maintenance decreasing turbine manufacturing costs
- Remote monitoring creating new data-based revenue for brownfield turbines
- Edge computing for fast decision making and reduced latency in system communication
- Non-invasive approach, zero impact to existing PI System server
- Real-time connectivity to PI System data

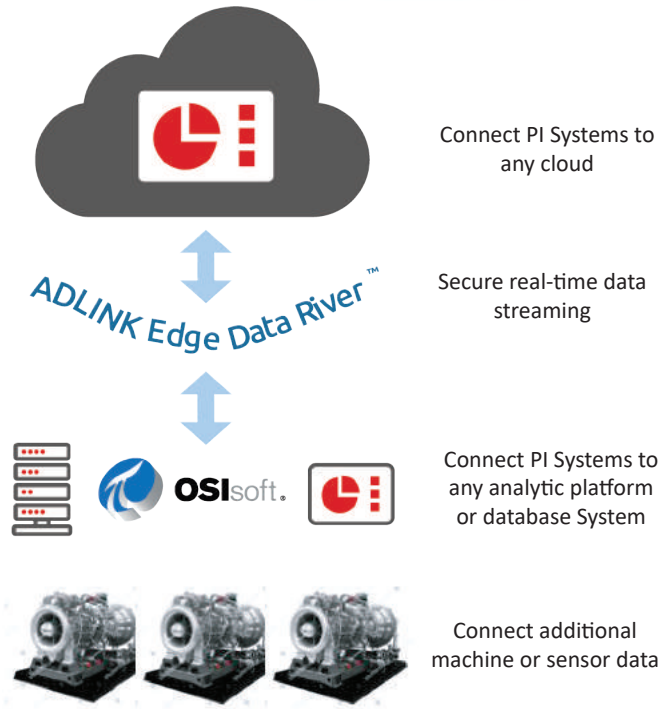


Figure 1: Solution Diagram

ADLINK Solution Components

Edge Hardware	+	*Edge IoT Software*	+	*Edge IoT Apps*	=	***ADLINK Edge® IoT Smart Solution***
ADLINK Matrix Intelligent Gateway		ADLINK Edge® with real-time data streaming on the Vortex Data River™		ADLINK Edge® OT Connect ADLINK Edge® Cloud Connect ADLINK Edge® Visualization ADLINK Edge® Historian Connect		



Customer's Existing IT and OT Components

- Compressor, combuster, turbine, exhaust components
- OSI® PI System®
- IBM Watson IoT
- HMI
- ModBus connection to asset controller
- Node-RED

About the Company

A major global power generation company operating in the North and South America, the business employs more than 2,000 people who design, build, install, monitor and service turbines, generators and environmental control systems. The company is a leader in using artificial intelligence and low carbon technologies to reduce costs and cut carbon emissions.

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