Enterprise KPI Reporting Use Case

Edge-based calculation engine for real-time KPI reporting with Veracode-compliant security in pharmacy operations.
Industry: Pharmaceutical (Mail Order Pharmacy)

Quick Facts

Attribute	Value
Application	KPI reporting for pharmacy operations
PLCs	Rockwell Automation (including custom controllers)
Historian	GE Historian 6.0
Database	Microsoft SQL Server (CVS SQL)
Clients	50+ client connections
SCADA Nodes	14 iFix nodes
Security	Veracode certified

The Challenge

Challenge: Modernize legacy SCADA applications for KPI reporting that failed modern security audits (including Veracode) and lacked flexibility for real-time downtime, OEE, and event monitoring.

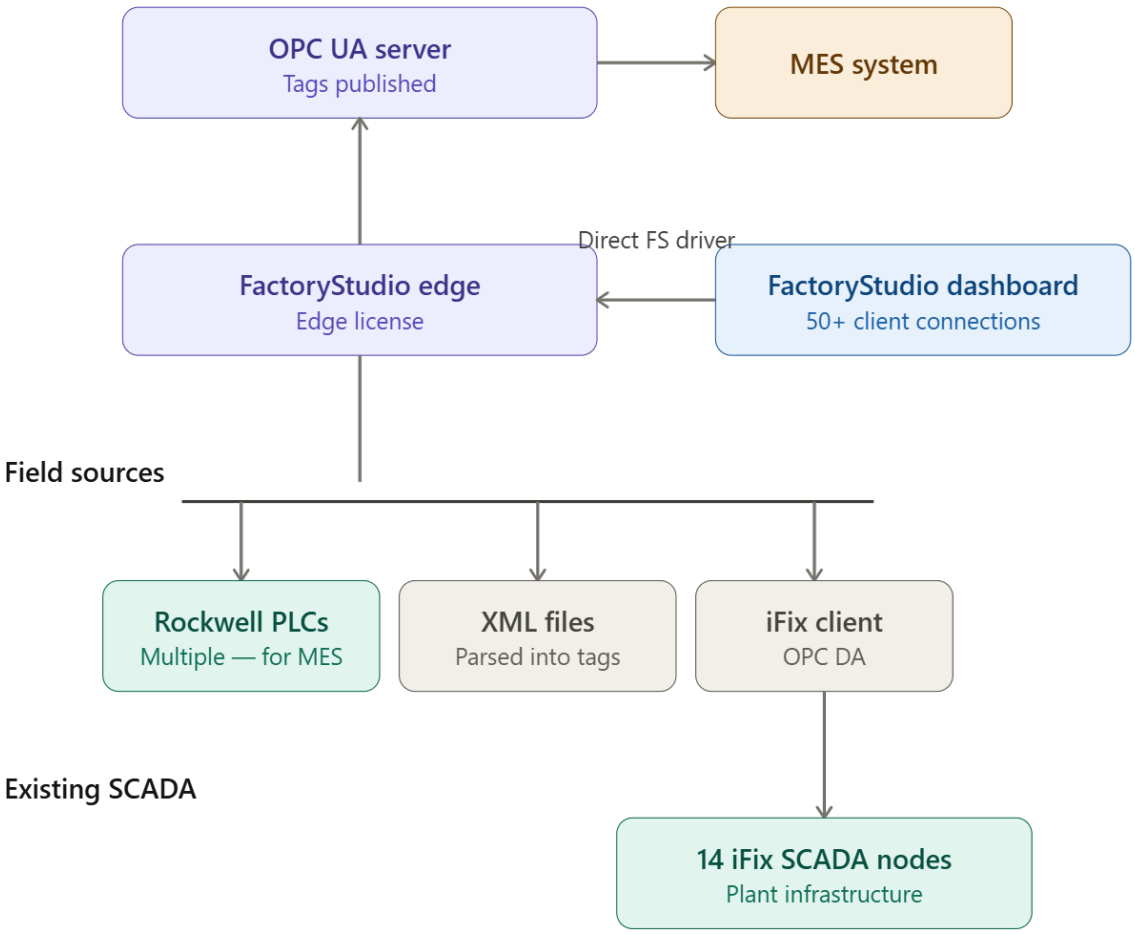
Specific pain points:

- Legacy applications failed Veracode security audits
- Fragmented system created compliance risks
- Delayed KPI visibility for operations
- Limited scalability for enterprise-wide deployment
- No real-time downtime and OEE monitoring
- Inflexible architecture for pharmaceutical MES integration

Impact: Compliance risks and delayed KPI visibility hindered operational decision-making across pharmacy facilities.

The Solution

Architecture



Tier	Component	Capabilities
Field	Rockwell PLCs (multiple)	Production data, custom controllers
Edge	FrameworX Edge (App Server 1)	Calculation engine, real-time KPI/OEE
Integration	XML Files	Parsed into tags from filter system for MES
Historian	GE Historian 6.0	Time-series data storage
Database	SQL Server (CVS SQL)	MES Event Monitor
Portal	FrameworX Portal & Monitor (App Server 2)	Dashboards, 50+ clients
Legacy	14 iFix SCADA Nodes	OPC DA data for dashboard, through an OPC DA to OPC UA gateway

Edge Calculation Engine

Calculation	Purpose
Downtime	Real-time tracking and categorization
OEE	Availability, performance, quality metrics

Security Metrics	Compliance monitoring
Event Processing	MES event correlation

Server Infrastructure

Server	Role
App Server 1	Local Engine + Edge Calculation Engine
App Server 2	Portal & Monitor
OS	Windows Server 2021 R2

Integration Points

System	Connection
Rockwell PLCs	Direct FS Driver
MES System	OPC UA Server (tags published)
Filter System	XML files parsed into tags
iFix SCADA	OPC DA, through an OPC DA to OPC UA gateway (FrameworX includes no OPC DA client connector)
GE Historian	Edge Historian feed

Key Enablers

FrameworX capabilities that made this solution possible:

Capability	Application
Edge Calculation Engine	Real-time KPI and downtime/OEE calculations minimizing historian overhead
Secure Enterprise Deployment	Passed Veracode and modern security audits
Templated Asset Types	Rapid deployment with consistent data models
Integrated Dashboards	Portal & Monitor with SQL integration for MES events
OPC UA Publishing	Tags published for MES system consumption
XML Parsing	Filter system data converted to tags

The Results

- **Real-Time KPI Visibility** — Downtime, OEE, and security metrics available for pharmacy operations
- **Compliance Achievement** — Passed stringent security screening and Veracode testing where legacy systems failed
- **Optimized Historian Performance** — Calculations shifted to edge reduced historian load and improved responsiveness
- **Scalable Deployment** — Standardized asset templates enable consistent rollout across multiple facilities
- **50+ Client Support** — Enterprise-wide dashboard access for operations teams
- **Reduced Compliance Risk** — Modern security posture eliminated audit failures

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This case demonstrates edge-based KPI calculation for pharmaceutical operations with Veracode-compliant security and optimized historian performance.

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