

Industrial analytics software that optimizes asset and process performance with a Process Digital Twin

## Optimize with AI/ML-based, 5-in-1 analytics capabilities in a closed-loop solution

Featuring a completely new and modernized user experience, Proficy CSense from GE Vernova uses AI and machine learning to enable process engineers to combine data across industrial data sources and rapidly identify problems, discover root causes, predict future performance, and automate actions to continuously improve quality, utilization, productivity, and delivery of operations.

Uniquely providing five analytics capabilities in one, modernized and user-friendly package, Proficy CSense has helped organizations around the world reduce costs by turning raw data into rapid business value. Engineers and data scientists can analyze, monitor, predict, simulate, and optimize and control setpoints in real time through Proficy CSense.

Additionally, Proficy CSense provides the capabilities to mine insights from historical data and rapidly develop, test, and deploy simple calculations, predictive analytics, and optimization and control solutions to reduce variability and improve operations.

Our new version 2024 offers significant improvements in user experience as well as free\* SCADA and Historian starter runtime editions to jumpstart your analytics with your Proficy software solutions.

### OUTCOMES BY DESIGN

- Deploy cloud-based or on-prem analytics that improve asset and process throughput, yield, quality, efficiency, and downtime by significant margins
- Combine, clean and format siloed data across the operations value chain into curated datasets for use in analytics
- Mine new insight from industrial data to maximize return on assets and optimize processes
- Use data to troubleshoot causes of asset and process performance issues rapidly
- Increase productivity with visual analytics in a thin client
- Monitor and optimize health and performance of base-layer PID control loops
- Validate and clean raw sensor data at the source to ensure integrity of downstream systems

## 01 Mine new insight from data & optimize operations across your enterprise

Proficy CSense's Troubleshooter enables engineers to rapidly troubleshoot continuous, discrete, or batch process performance by mining insight from available sensor and operations data. Seamless connectivity, rich visualization, and predictive analytics enable users to analyze operating scenarios, quantifying the impact that operational changes will have on key performance metrics and identifying causes for performance variation.

## 02 Improve production throughput, yield, quality, efficiency, and WAGES utilization

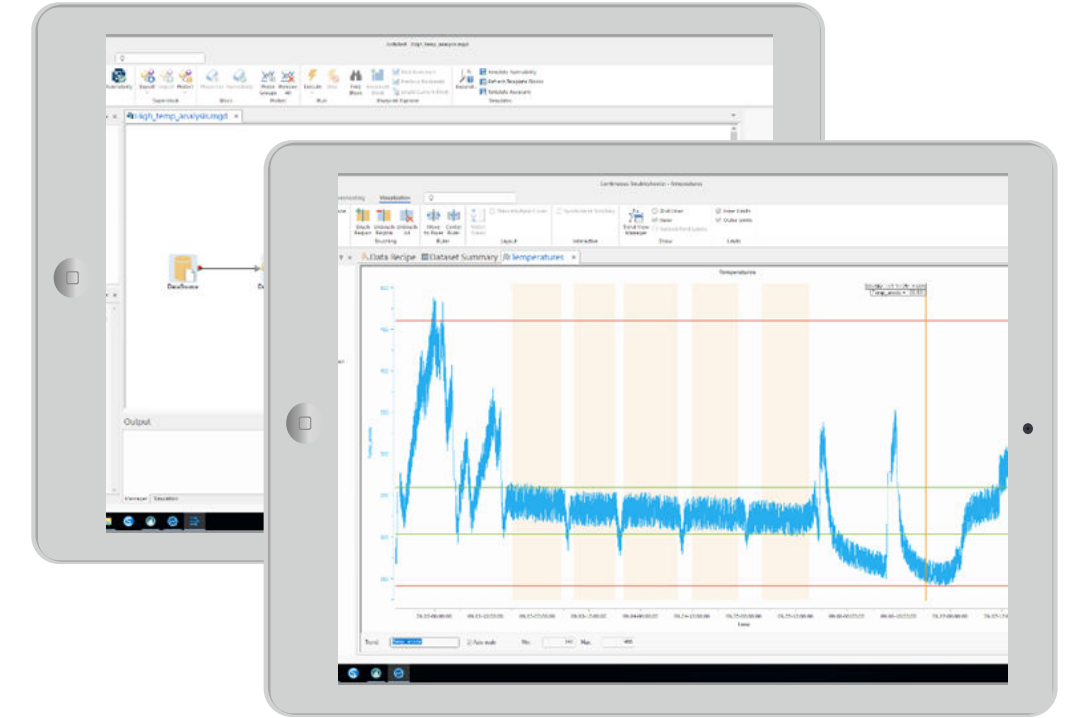
Proficy CSense's Architect enables engineers to rapidly develop analytics that can improve critical KPIs including Water/Air/Gas/Electricity/Steam (WAGES) use with significant margin. A comprehensive solution-development environment provides visual analytic building blocks. Build and test calculations, predictive analytics, and real-time optimization and control. Leverage real-time and historical data sources and drag-and-drop access to functional libraries. Save reusable templates for easy deployment to similar assets or process units and permanently deploy into production using Proficy CSense's Runtime Manager.

## 03 Enhance engineering productivity & accelerate time to value

Proficy CSense's Architect also allows engineers to use the high-value analytics templates for rapid enterprise-wide deployment – easily capturing expert knowledge and best practices and combining with insight mined from Proficy CSense's Troubleshooter. Visual drag-and-drop analytics accelerate time to value and reduce dependence on data scientists and programmers. Online demos and an interactive training course can enable rapid mastery of the software with easy-to-follow demonstrations and guided simulations.

## 04 Leverage all-new, user-friendly analytics visualization for faster response

In addition to the completely modernized Proficy CSense, take advantage of modern, thin-client visualization with the included Proficy Operations Hub app: Process+ Control Loop Monitoring. For comprehensive PID control loop performance monitoring, this Web UI puts high-performance analytics at your fingertips, where and when you need it.



*"Some systems are just too complex and have too many variables for operators to run optimally. That's when we need the help of dedicated advanced-control intelligence that can deal with the complexities of our unique problems."*

*- Tim Spandiel, Manager, Impala Platinum's Base Metals Refinery*

### FREE STARTER EDITIONS FOR IFIX®, CIMPLICITY® & HISTORIAN USERS

Jumpstart advisory analytics with integrated templates.

- Alarm Pattern Recognition – Understand how alarms occur together to assist with understanding root causes and rationalize alarm configuration. Easily identify daily top occurring alarm pairs.
- PID Control Loop Performance Monitoring – Monitor PID control loop performance and help detect process and equipment issues before impact on operations.
- AI/Machine Learning Templates
  - Predict numeric outputs (such as Quality)
  - Predict non-numeric outputs (such as Faults)

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### 5-in-1 Proven Industrial Analytics Software

- Analysis
- Monitoring
- Prediction
- Simulation
- Optimization & Control of setpoints

### New in Version 2024

- Completely modernized and user-friendly interface for increased ease of use
- Expanded interoperability with other Proficy 2024 software including free Starter Edition and templates with iFIX HMI/SCADA, CIMPLICITY HMI/SCADA, and Proficy Historian
- Supercharged performance with 64-bit CSense enabling users to analyze larger datasets, utilize any 64-bit open-source Python modules, and deploy more powerful analytics, algorithms and AI/ML models
- Designed for AI/ML with new array datatypes that enable processing datasets in a single execute and mixing real-time stream and batch processing in a single real-time analytic. For example, training an AI/ML model and using in real time for high-speed predictions or closed-loop control.
- Runtime Edition license now includes a Proficy Operations Hub Ultimate license for up to 5 users – create your own analytics web dashboards and operator UIs

### New in Version 2023

- Comprehensive vendor-independent PID control loop monitoring with auto system identification and auto PID loop tuning
- Improved support for large-scale analytics deployments with up to thousands of analytics on a single server (dependent on analytic and server specifications): reduced deployment time, increased concurrent execution limits, more efficient historian data exchange, and improved runtime management tools
- Flexible deployment options: on-prem or in the cloud on supported Virtual Machines (VMs) in customer's AWS or Azure Virtual Private Cloud (VPC)

### Proficy CSense: Rich Analytics, Easy Configuration

- Enables building rich analytic solution templates with no required programming
- Simple calculations, data cleaning, math, statistics, machine-learning models, real-time optimization, and advanced process control
- Plug-and-play connectivity to historical and real-time data sources and automation
- Rapid wizard-driven data mining for engineers for fast time-to-insight
- Built-in support for data quality to make real-time data cleaning and validation easy

- Comprehensive platform to develop, integrate, test & deploy real time solutions
- Easy visual drag-and-drop functional blocks for subject matter experts
- Access to script languages and CSense SDK for powerful analytic solutions with plug-and-play incorporation of Python, and third-party .Net content
- Languages: English, Japanese, Chinese, Russian, French

**Self-Service Training** – interactive software training courses are available through GE Vernova's EDGE web site

### Proficy CSense Licensing

#### Runtime Edition

- For permanent production deployment and management of analytic solutions
- Includes Architect, Runtime Manager, and an Operations Hub Ultimate license

#### Developer Edition

- For data analysis and analytic solution development and testing
- Includes Continuous and Discrete & Batch Troubleshooters, Architect, and Runtime Manager for solution development and testing purposes only

### Troubleshooter Edition

- For offline, ad hoc, and on-demand data analysis, process modelling, and troubleshooting
- Includes the Continuous and Discrete & Batch Troubleshooters, along with all data connectors

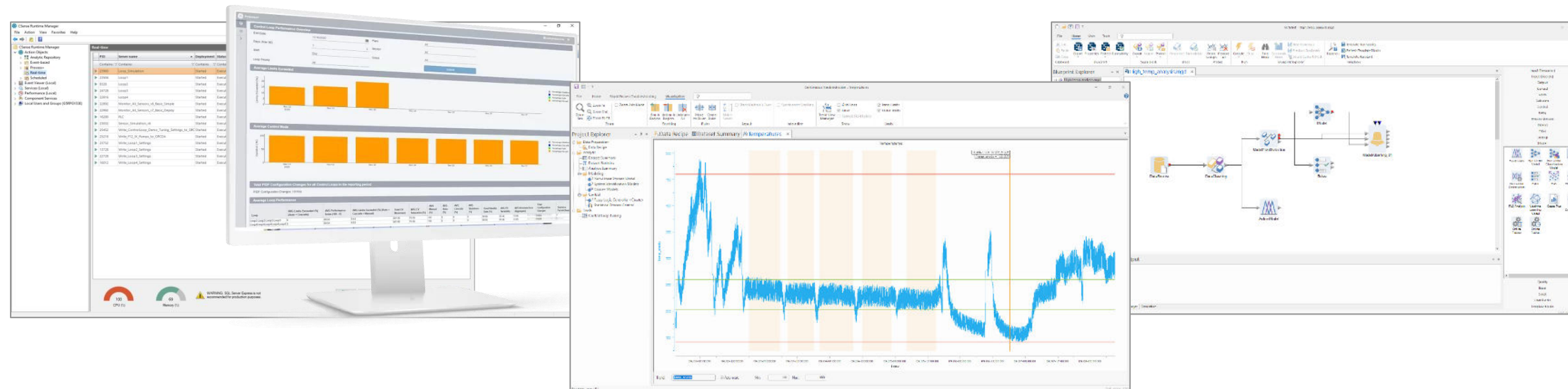
### \*NEW SCADA Starter Runtime Edition

- Free limited 1-tag runtime license provided with iFIX and CIMPLICITY HMI/SCADA for deployment of 1 instance each of provided templates and/or 1 custom analytic with maximum 1 output tag.
- Includes Architect and Runtime Manager

### \*NEW Historian Starter Runtime Edition

- Free limited 1-tag runtime license provided with Proficy Historian TERM license and Proficy Historian for Cloud subscription for deployment of 1 instance each of provided templates and/or 1 custom analytic with maximum 1 output tag.
- Includes Architect and Runtime Manager

Consult [product documentation](#) for hardware/software requirements. Confirm standard vs optional features with GE Vernova representative. Specifications are subject to change without notice. Results and functionality vary, depending on existing hardware/software, applications, implementation, and other factors.



LEARN MORE ABOUT PROFICY CSense

GET FREE TRIAL

6 HOURS FREE ANALYTICS CONSULTING