PROFICY® CSENSE 2023

GE VERNOVA

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

Optimize with 5-in-1 analytics capabilities in closed-loop solution

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 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 insight from historical data and rapidly develop, test, and deploy simple calculations, predictive analytics, and optimization and control solutions to reduce variability and improve operations.

OUTCOMES

- Deploy cloud-based or on-prem analytics that improve asset and process throughput, yield, quality, efficiency, and WAGES by significant margins
- 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
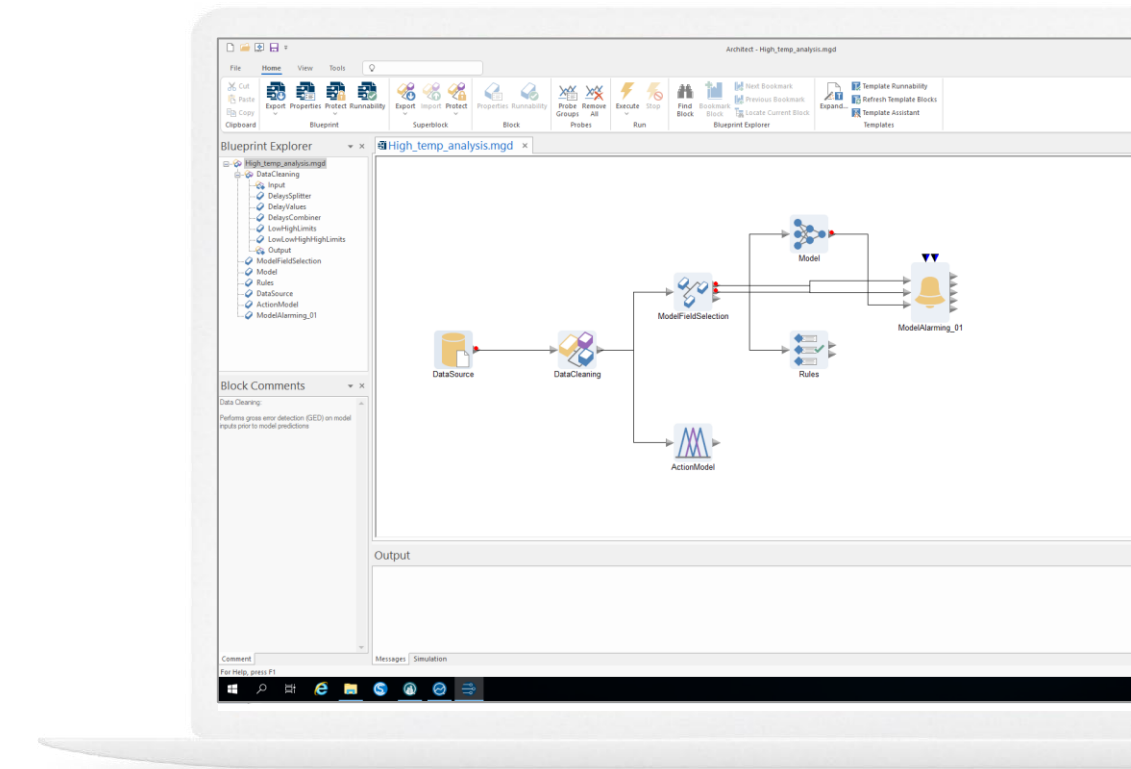
01 Mine new insight from data

Proficy CSense's Troubleshooter enables engineers to rapidly troubleshoot continuous, discrete, or batch manufacturing process performance by mining insight from available sensor and production 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

Proficy CSense's Architect enables engineers to rapidly develop analytic solutions that typically improve production throughput, yield, quality, efficiency, and Water, Air, Gas, Electricity, Steam (WAGES) use with significant margin. A comprehensive solution-development environment provides visual analytic building blocks. This allows users to build and test calculations, predictive analytics, and real-time optimization and control. Solutions are enhanced with real-time and historical data sources and drag-and-drop access to rich functional libraries. Solutions are saved as reusable templates for easy deployment to similar assets or process units and permanently deployed into production using Proficy CSense's Runtime Manager.

03 Enhance engineering productivity

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

Mine insight from data and causes of performance variation faster with Proficy CSense and Process Digital Twin technology.

04 Leverage modern analytics visualization for faster response

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

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5-in-1 Proven Industrial Analytics Software

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

New in Version 2023

- Interoperability with other Proficy 2023 software
- 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)

New in Version 8.5

New installation options to suit every plant

- Auto-install SQL Express if you don't have SQL server
- Use Local or Remote, Dedicated or Shared SQL server as database
- Multiple CSense installations can share the same SQL server

New OPC UA Client support

- Analyze historical data from OPC UA servers
- Real-time analytics can Read from and Write to OPC UA servers

New Control Optimization tools

- System Identification Assistant – Estimate process transfer function models from historical data for process simulation or control optimization
- PID Control Loop Tuning Assistant – Calculate recommended PID loop tuning settings for PID control loop performance optimization and display in CSense Process+ control loop monitoring reports.

Rich Analytics Feature Set, 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

Proficy CSense Licensing

Runtime Edition

- For permanent production, deployment, and management of analytic solutions
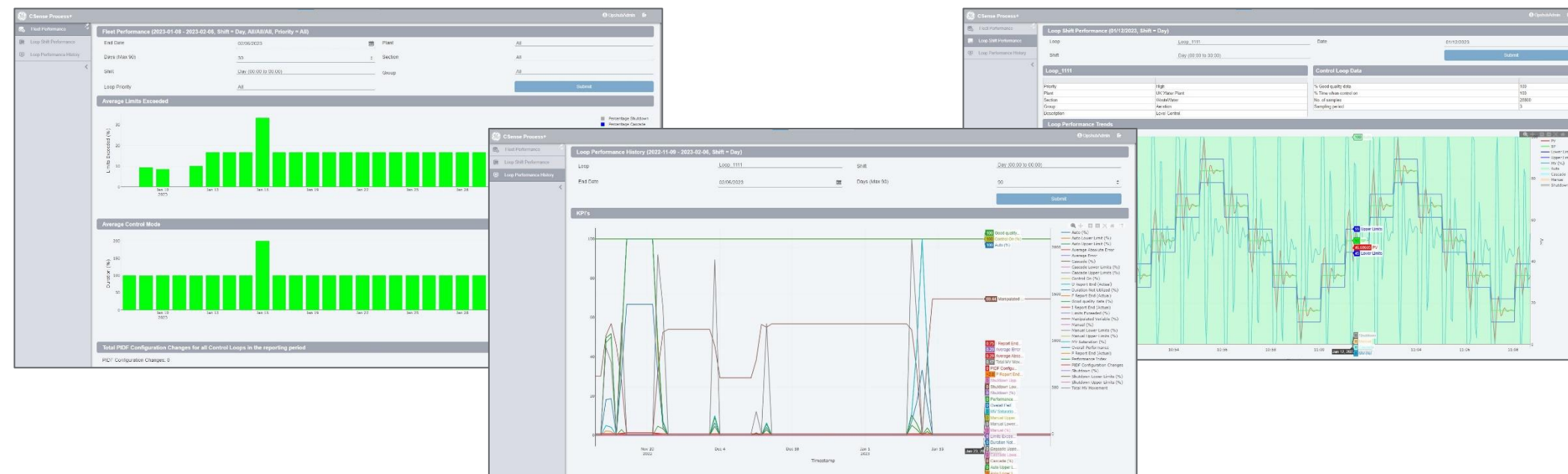- Includes Architect and Runtime Manager

Developer Edition

- For data analysis and analytic solution development and testing
- Includes both the 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

CSense's self-service training interactive software training courses through GE Vernova's EDGE web site is included with all editions

Please consult the online Getting Started Guide product documentation for hardware and software requirements.

CSense Process+ provides comprehensive web-based PID control loop performance monitoring.

LEARN MORE ABOUT PROFICY CSENSE

GET A FREE TRIAL

6 HOURS FREE ANALYTICS CONSULT

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Services

In the world of Industrial Internet of Things (IIoT), organizations are able to optimize productivity, reduce costs, and achieve Operational Excellence. While this is an exciting time for opportunity and growth, it can also bring on new challenges, questions, and uncertainty. No matter where you are on your IIoT journey, GE Vernova has the right services offering for you.

Advisory Services We can help you plan and start your IIoT journey in a way that aligns to your specific business outcomes.

Managed Services We can help you maintain your critical machines from one of our remote locations around the world using model-based predictive analytic technology.

Implementation Services Our experienced global Automation partners can implement a collaborative, multi-generational program that marries your existing investments to the right enhancements and technology.

Education Services We specialize in education services to ensure that you're leveraging our solutions to the fullest extent with our training and certificate programs.

Acceleration Plans Let us help by ensuring that your business continues to operate at its highest efficiency, all while mitigating risks to
your investments.

Security Services Our solutions provide industrial-grade security for a wide range of OT network and application topologies.

Related Products for Your Digital Transformation Journey

GE Vernova's Proficy suite helps you precisely monitor, control, and visualize every aspect of your operations, enabling operators to make the best decisions faster. Transforming your business requires foundational innovations that lay the groundwork for future success.

iFIX
Gain visibility into your operations and secure agility for smarter decision making that drives results.

Proficy Operations Hub
A centralized environment for aggregating
and visualizing contextual and situational
information for industrial applications – supporting rapid application development
and rich displays for faster operational response and better decision making.

CIMPLICITY
Drive real-time visibility for smart operators with true client-server based visualization and control.
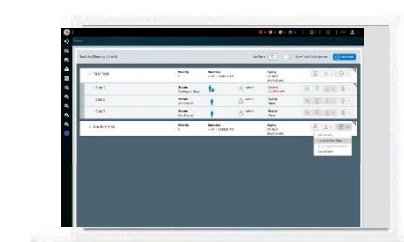
Proficy Plant Applications
Maximize overall equipment effectiveness (OEE), improve production scheduling, and ensure product quality by leveraging real time production data

Proficy Historian
Optimize asset and plant performance through time-series and A&E industrial data collection and aggregation. Improve decision-making with advanced trend analysis.

Proficy Workflow
Guide operators with dynamic, interactive electronic work instructions and eSOPs for more consistent operations and optimized processes.

About GE Vernova's Proficy® Software & Services

GE Vernova's (NYSE: GEV) Proficy® Software & Services empowers teams, illuminating the path to a greener, more profitable future. Our proven industrial software accelerates innovation, enables connected workers, and operationalizes sustainability. We're driving measurable progress for over 20,000 diverse customers around the world. The Proficy portfolio includes cloud-based and on-prem HMI/SCADA, MES, industrial data management, and analytics. Our software solves the toughest industrial challenges and is used in applications such as discrete, hybrid, and continuous manufacturing; utilities automation; metro transit; and much more. Proficy offers architecture flexibility including single machines, remote substations, and complex, distributed networks that span multiple factories and geographies. Explore Proficy Software & Services.

Contact

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