



Historian for Linux from GE Digital

Efficient, device-level data collection and storage for IIoT analysis

Collect time-series data at the edge for machine-level analytics

Historian for Linux from GE Digital revolutionizes data collection and storage by residing at the edge device and delivering distributed data collection to support the Industrial Internet of Things (IIoT).

Instead of higher level systems polling for device data, Historian for Linux nodes push machine data to the plant level, providing a new, more efficient mechanism that includes store and forward. With its small footprint, the software can sit on many physical IIoT devices and controllers that feed machine data to historians at the plant or enterprise level, which in turn send data to the cloud for analysis and process optimization.

In addition to supporting machine-level analytics and reporting, Historian for Linux also provides data retention for regulatory purposes.

Based on GE Digital’s proven plant-wide Historian technology, Historian for Linux offers a cost-effective solution for edge applications. Furthermore, it simplifies deployment and management for original equipment manufacturers (OEMs) or large manufacturers with distributed assets needing a foundation for IIoT.

Outcomes

- Achieve machine-level data collection and storage, driven from the edge
- Improve efficiency by eliminating polling from the plant level
- Achieve a true IIoT data architecture for analytics and reporting
- Reduce costs with a very small footprint for edge devices
- Secure-by-design data collection and storage
- Simple installation and easy to use
- Docker container for fast standardized deployment
- Cloud ready for machine and process analysis and optimization

01 Efficient machine-level data collection and storage

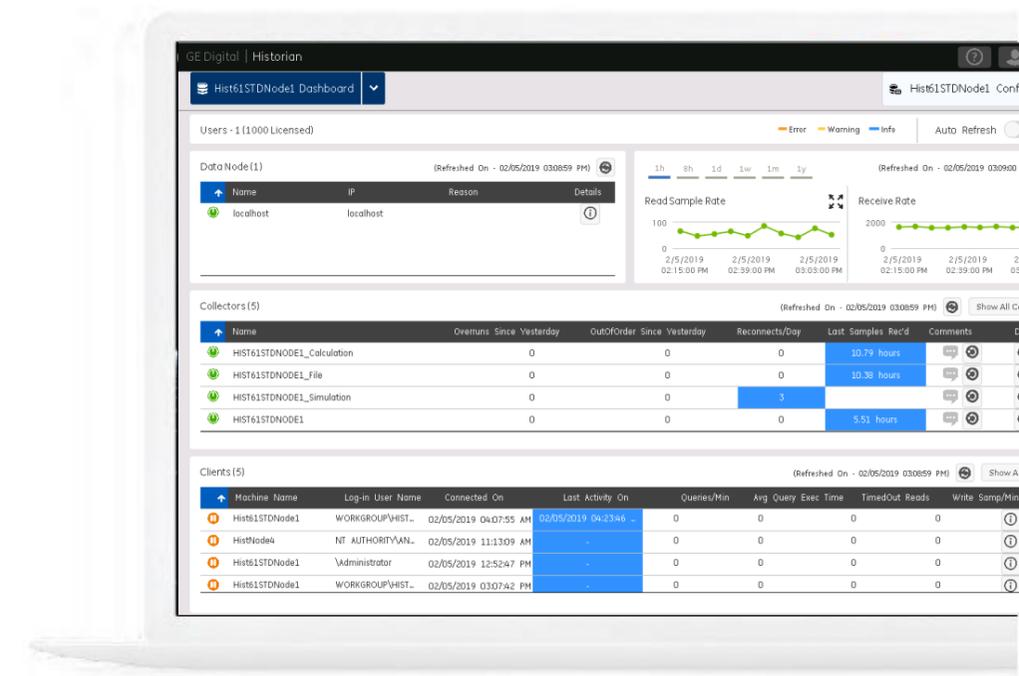
By streaming data to higher level systems, Historian for Linux offers a more efficient way to collect and store data from thousands of different machine-level devices. The software includes collectors for OPC UA as well as MQTT, the de facto IIoT standard protocol. A REST API enables access to stored data for analytics and reporting. Integrate Historian for Linux nodes with GE Digital’s plant-wide Historian and Predix Platform Time Series via GE Digital’s Server to Server or Server to Cloud Collector.

02 Reduce costs with Linux and Docker

With a small, economical footprint, Historian for Linux can reside on most any edge device, including PLCs or other controllers. The Linux platform provides both low initial cost and lower lifecycle costs. Applications require as little as a single core x86 CPU, 1 GB RAM, and 8GB of storage. By leveraging the Docker container architecture, users can easily deploy the specific Historian capabilities they need for the application.

03 Speed deployment and management

Historian for Linux allows developers to easily deploy their applications in a Docker sandbox (container) to run on the host OS. Users can package their application with all dependencies into a standardized unit. The “Dockerized” Historian for Linux shares a common architecture for Linux and Windows applications with common interfaces and clients. Additionally, Historian for Linux nodes can be managed and remotely configured from the Predix cloud environment when deployed on Predix Edge-based devices.



With a true IIoT architecture, Historian for Linux sends machine-level data to plant and enterprise systems for higher level analytics and reporting.

04 Reduce costs with Linux and Docker

Historian for Linux allows machine-level data to be streamed in a secure-by-design method and with store and forward protection against data loss to plant-level historians or other enterprise systems.





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Features

- Time-series data collection, archiving and retrieval
- Greater efficiency with push to plant level systems versus polling
- Store and forward for data integrity
- Collectors: MQTT, OPC UA, Historian Server to Server
- REST API for data query from Historian database
- Docker container architecture
- Easy-to-use Web-based admin console
- Historian Tuner for controlling several database operations with a JSON file
- OAUTH2-based authentication and authorization
- Fully compatible with Predix Edge and Edge Manager, including remote management and configuration capabilities
- Predix Cloud and other client connectivity

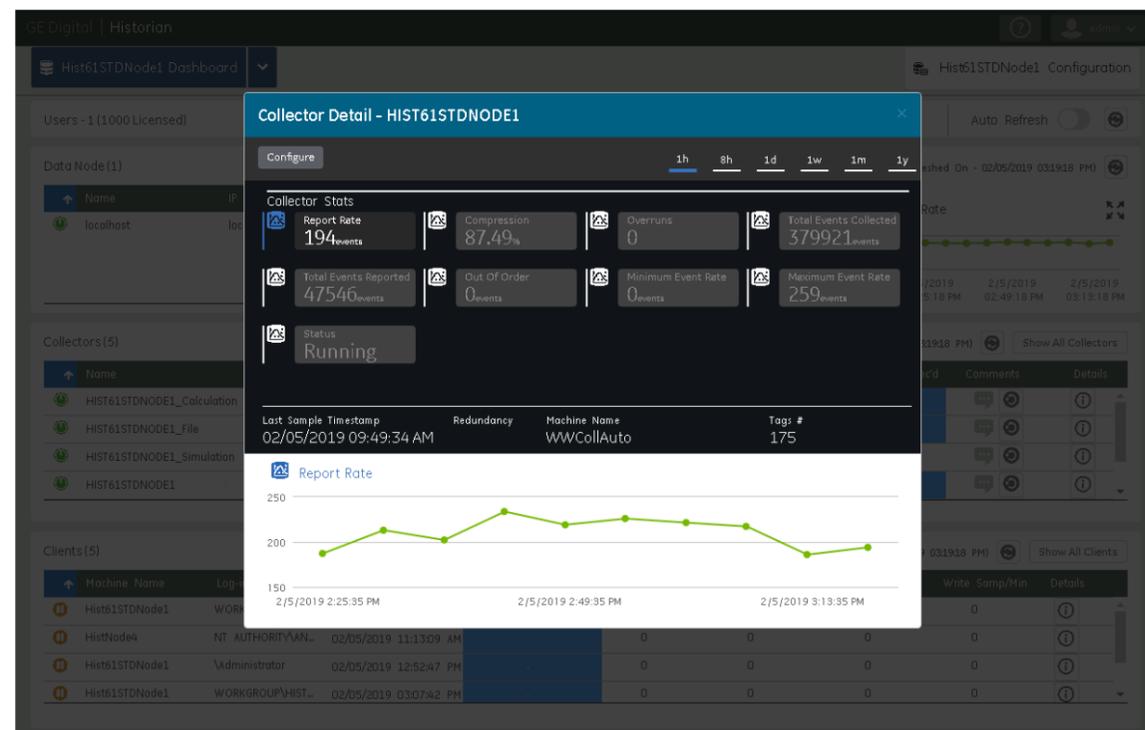
Hardware Requirements

- Any x86 based Linux machine or Linux virtual machine
- 1GB RAM, 8GB storage

Software Requirements

- Linux Operating System
- Docker Engine

Hardware and software requirements are representative and may vary by customer deployment. Please consult the product documentation for more details.



Take advantage of efficient, device-level data collection and storage for IIoT analysis. With its small, cost-effective footprint, Historian for Linux collects the time-series data at the edge that you need for machine-level analytics, reporting, and regulatory data retention.

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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 Digital 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.

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

Related Products

GE Digital's HMI and SCADA suite helps you precisely monitor, control, and visualize every aspect of your operations, enabling operators to make the best decisions faster.



iFIX

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



CIMPLICITY

Drive real-time visibility for smart operators with true client-server based visualization and control.



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

Continue your IIoT journey

Transforming your business requires foundational innovations that lay the groundwork for future success. It requires connecting assets and processes securely to drive operational efficiencies, reduce unplanned downtime and improve performance.

PREDIX



Predix

Innovate and transform your business with the cloud-based operating system for the Industrial Internet, purpose-built for industry.

Plant Applications

Maximize overall equipment effectiveness (OEE), improve production scheduling, and ensure product quality by leveraging real time production data



Workflow

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

About GE

GE (NYSE: GE) is the world's Digital Industrial Company, transforming industry with software-defined machines and solutions that are connected, responsive and predictive. GE is organized around a global exchange of knowledge, the "GE Store," through which each business shares and accesses the same technology, markets, structure and intellect. Each invention further fuels innovation and application across our industrial sectors. With people, services, technology and scale, GE delivers better outcomes for customers by speaking the language of industry.

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