Proficy Historian 8.1 from GE Digital

Powerful industrial time-series and A&E data collection for on-premise and cloud-based storage & analysis

Best-in-class Historian from edge to cloud with data analysis in context

Proficy Historian from GE Digital is a best-in-class historian software solution that collects your industrial time-series and Alarms & Events (A&E) data needed to analyze asset and process performance, so you can drive greater business value.

The emergence of cloud-based Industrial Internet of Things (IIoT) and big data solutions has spurred continued investment in our Historian. With decades of experience and thousands of successful customer installations around the world, Proficy Historian changes the way companies perform and compete by making data useful.

The new Proficy Historian 8.1 reduces costs with Historian ETL (Extract, Transfer, Load) for sophisticated file-oriented data transmission for Enterprise Historian, Remote Collector Management, and more. With Proficy Historian, you can take advantage of simple yet powerful features to unlock new value from your equipment and process data, and business models.

01 Achieve data analysis in context

With Proficy Historian, users have the ability to analyze data in context via Proficy Operations Hub and the Historian Analysis run-time application, which are licensed with Proficy Historian 8.0 and later Standard and Enterprise versions. The combination of Proficy Historian and Proficy Operations Hub provides a powerful data management solution with asset model context and visualization. Users receive data aggregation across multiple sources or historians, ability to define an asset model including tag mapping, and advanced trend analysis. Proficy Historian also includes an Excel Add-In for Proficy Operations Hub, enabling users to query historical data based on the asset model.

02 Improve data security

With data security as our highest priority, Proficy Historian offers common and shared User Account Authentication (UAA). Integrated with LDAP, this feature eases security, allowing users to choose the common UAA deployed by other products in their application. With Version 8.1, cloud-enabled collectors enhance authentication through proxy services by supporting username and password authentication.

03 Simplification, ease of use, reduced costs

Proficy Historian installs in minutes and offers a small footprint yet scales to support hundreds of users and millions of individual machine data points.

- Achieve fast time to value with simple installation and easy-to-use web clients with integrated tag searching and drag and drop features
- Secure-by-design data collection and storage
- Small, powerful footprint, scaling to hundreds of users and millions of machine data points
- Take advantage of data analysis in asset model context with the time-saving trend analysis card
- Support high availability with data redundancy
- Leverage continuous and highly scalable data read and write functionality
- Central management of remote data collectors to reduce maintenance costs and downtime
- Save time and costs with seamless ingestion to HDFS, adding time-series data to your big data analytics

04 Faster configuration and easy connectivity for IIoT

Connect to your machine data with an existing collector or build your own using our SDK. Any collector can be configured to send data to your local Historian or to cloud-based Predix applications. Version 8.1 also supports hybrid on-prem/cloud data models with a new server-to-Azure IoT Hub Distributor that enables the transfer of data from a Historian server to an Azure IoT Hub end point, all while leveraging GE Digital’s rich data aggregation and collection capabilities.

"Proficy Historian is the heart of the [system]. This solution allows more accurate data to be implemented in real time for each machine and product.”

Hervé Husson, Automation and Industrial IT (A2i) Manager, Terreal

The dashboard provides critical information from your data in a single view.

Outcomes

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**Features**

- **Version 8.0:** License for Proficy Operations Hub Server and HTML5 Historian Analysis run-time application (free with Proficy Historian Standard or Enterprise) with features including ability to define an asset model, tag mapping, and automatic trend analysis with annotations. Other new features: Excel Add-in for Proficy Operations Hub, common UAA service, APIs to track version information of collectors, Query Results API, Write Tag API, Rename Tag API, MQTT collector, and Java APIs

- Easily deployable mirrored architecture based on GE’s U.S.-patented highly efficient and secure storage format
- Alarms & Events database, allowing retrieval of A&E in correlation to time-series data
- Intelligent system diagnostic engine and dashboard
- Browser-based central administrative console and trend client
- UAA/OAuth2 Java Web Token security model
- Multi-threaded for high performance
- Scales to millions of tags
- Predix cloud and other client connectivity
- Cloudera certified method to move and query data in HDFS / Hadoop to Parquet
- Public REST API and Java API

**Hardware Requirements**

The following hardware requirements are not comprehensive. Please refer to the Getting Started Guide or GE Digital for complete requirements information related to your application.

- **Standard Historian Server** – Minimum 2.4 GHz clock-speed Intel Core i3 or i5 or i7 CPU or equivalent AMD Phenom CPU with 8 GB RAM; 80 GB free hard-drive space for the data archives, message files, buffer files, and log files used by the system; 100 Mbps TCP/IP compatible network interface adapter for network communication and certain I/O drivers.
- **Data Collector Node** – Minimum 2.0 GHz clock speed Intel Core i3 or i5 or i7 or Xeon or equivalent AMD Phenom CPU with 2 GB RAM; 40 GB of free hard-drive space to store buffered data; TCP/IP compatible network interface adapter for network communication and certain I/O drivers.
- **Microsoft Cluster Service** – Minimum 2.6 GHz clock-speed Intel Core i3 or i5 or i7 or Xeon or equivalent AMD Opteron CPU with minimum 8 GB RAM; 80 GB of local, free hard-drive space; 40 GB shared SCSI hard-drive (RAID preferred); Two 100Mb/s TCP/IP-compatible network interface adapters for network communication and certain I/O drivers (one for public network, another for private network).

Note: The configuration of each server added to the cluster must be identical to the other servers in the cluster.

**Software Requirements**

- Browsers for Web Admin and Web Trend Tool Client Access: Chrome 39+, Firefox 46+, Browsers for Historian Help: Chrome 39+, Firefox 46+, Microsoft Edge 40
- Web Server: Microsoft .NET Framework 4.5.2; Historian Predix cloud and other client connectivity
- Other Information
  - Collectors: Calculation, CygNet, File, iFIX, MQTT, ODBC, OPC, OPC HDA, OPC UA Data Access, OSI PI (iFix, JDE, OEE, Wonderware Server, Wonderware). Notes: To collect data from CMMPLICITY, you must use the Historian OPC collector with the CMMPLICITY OPC Server. See documentation for list of Bi-Modal Collectors. Majority of collectors can write to cloud.
  - SQL Server 2012 SP3; SQL Server 2014 SP1 (E/S/P); SQL Server 2016 (E/S/P); SQL Server 2017 (E/S/P); SQL Server 2019
  - VMware ESXi: 5.0 and above

Both your IT department and end users will love the ease of deployment, scalability, simplicity, and speed of getting the data and value out of Proficy Historian.
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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.

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

Related Products
GE Digital’s Proficy 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.

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

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

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

Proficy 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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