



# Historian 7.0 from GE Digital

Powerful industrial time-series data collection that provides Predix IIoT connectivity

## Best-in-class historian solution

[Historian from GE Digital](#) is a best-in-class historian software solution that collects your industrial time-series data needed to analyze asset performance so you can drive greater business value. The emergence of cloud-based Industrial Internet of Things (IIoT) and big data solutions has spurred new investment in our Historian.

Proven with a 15+ year legacy and thousands of installs at customer sites, Historian changes the way companies perform and compete by making data useful. You can take advantage of the solution's simple yet powerful features to unlock new value from your machine data and business models.

### Outcomes

- Achieve fast time to value with simple installation and easy-to-use web clients with integrated tag searching and drag-and-drop features
- Support high availability with data redundancy
- Leverage continuous and highly scalable data read-and-write functionality
- Reduce storage costs
- Save time and costs with seamless ingestion to HDFS, adding time-series data to your big data analytics
- Take advantage of the time-saving dashboard, whereby critical data finds you



## 01 Simplification and improved time to value at enterprise scale

Historian installs in minutes and offers a small footprint, yet it scales to support hundreds of users and millions of individual machine data points. Administration and trending capabilities are provided through a super-thin and secure Web application, generating immediate value following your install and tag configuration, and our out-of-the-box data mirroring capability supports your high availability and data-redundancy needs.

## 02 Data security

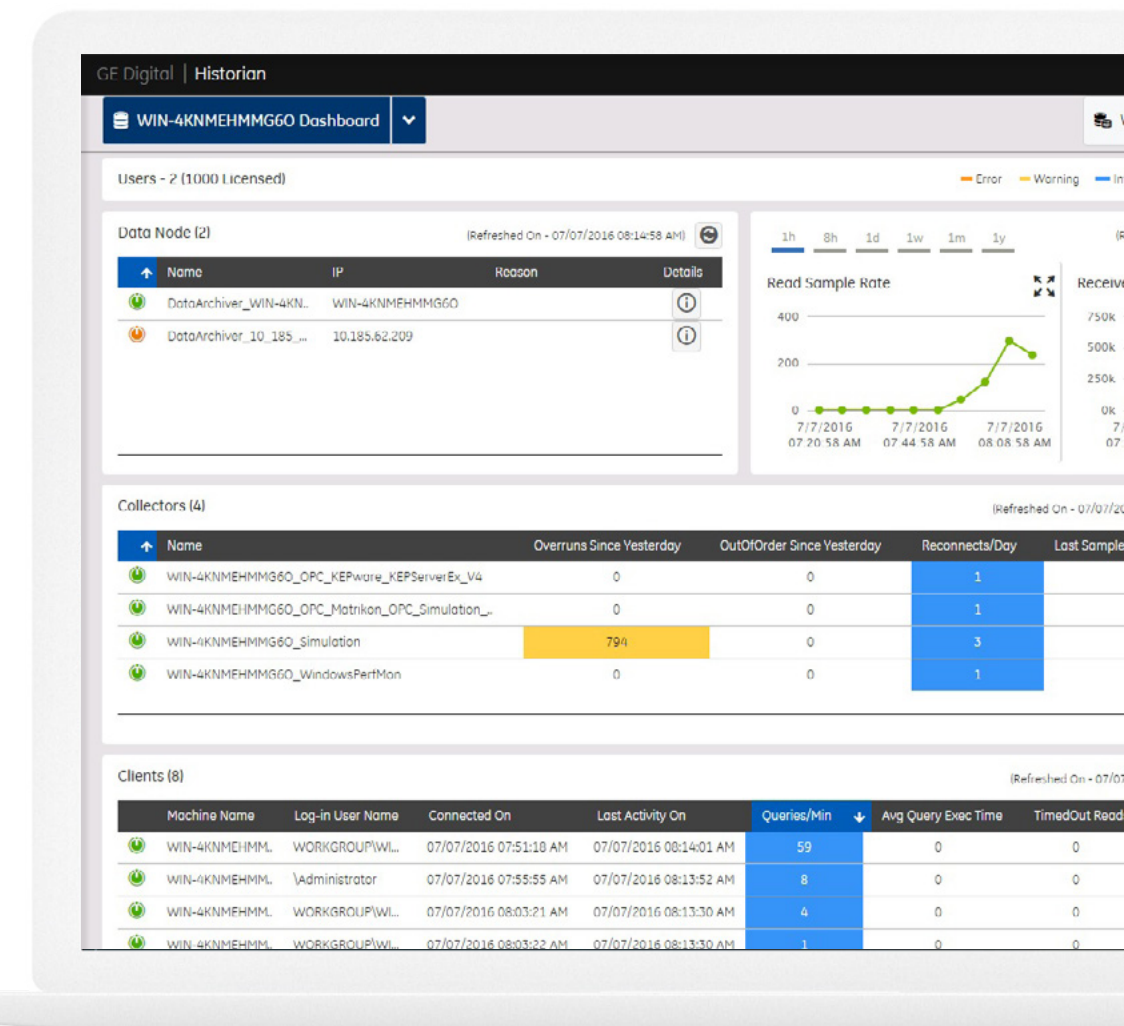
Data security remains our highest priority, so we've implemented the same secure token approach with Historian as with our other Predix applications. This means you can implement domain security groups down through all of our clients through tag-level and collector-level security.

## 03 Cloudera-certified method to move and query data in HDFS / Hadoop to Parquet

Our Historian HD solution provides a native method to move Historian data from a Windows computing environment to a Linux-based Hadoop HDFS cluster, offering fault tolerance and horizontal scale to support your industrial big data analytic requirements. Historian HD is Cloudera Certified, and also runs on Pivotal and Hortonworks.

## 04 Predix cloud and other client connectivity

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](#) solutions like [Asset Performance Management](#) from GE Digital and [Brilliant Manufacturing](#) from GE Digital. Our Public REST API makes it simple to connect and extract value from Historian with third-party clients.



With Historian, viewing trends is easy, enabling you to unlock new value from your machine data.

"Historian offers a highly efficient storage model for industrial time-series data, helping us provide significant savings to our customers' bottom line."

**Eric Pool, Consulting Engineer & Chief Architect,  
GE's Atlanta M&D Center**



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## Features

- Easily deployable mirrored architecture based on GE's U.S.-patented highly efficient and secure storage format
- 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 connectivity
- Cloudera-certified method to move and query data in HDFS / Hadoop to Parquet
- Public REST API

## Hardware requirements

Historian performance testing was done on the following systems based on Historian sizing:

- 50,000 tag Historian with 20 collectors with 2,500 tags apiece, 500 MB Archive size: Dell Precision T3600 model, 1 CPU, 4 Cores, 3.40 GHz Speed, 16 GB Ram, 2 TB in built storage, 7,200 RPM disk, Windows Server 2012 R2, 100 mbps network
- 250,000 tag Historian with 70 collectors: Dell Power Edge R 710 model, 64 GB Ram, 2 CPUs, 6 Cores, 2.67 GHz speed, 1 TB hard disk (Direct Attached Storage), 10 K RPM Raid 0 disks and SSD's, Windows Server 2012 R2, 1 GB network
- 2,000,000 tag mirrored Historian with 2,000 collectors and 20 read clients, 200 data stores:
  - Primary Node: HP ProLiant DL560, Dual Intel Xeon CPU ES-4617 processors, 2.9 GHz, 6 cores, 6 logical processors, 256 GB physical memory 1 GB network
  - Secondary Node: Dell PowerEdge R815, Quad AMD Opteron processors, 2.4 GHz, 8 cores, 8 logical processors, 256 GB physical memory

## Software requirements

- Operating Systems (64-bit systems only for your Historian Server): Windows Server 2012, Windows Server 2008 R2, Windows 7, 8.1, and 10
- Browsers for Web Admin and Web Trend Tool Client Access: IE 10, IE 11, Chrome 49, Firefox 46
- Web Server: Tomcat

## Third-party components

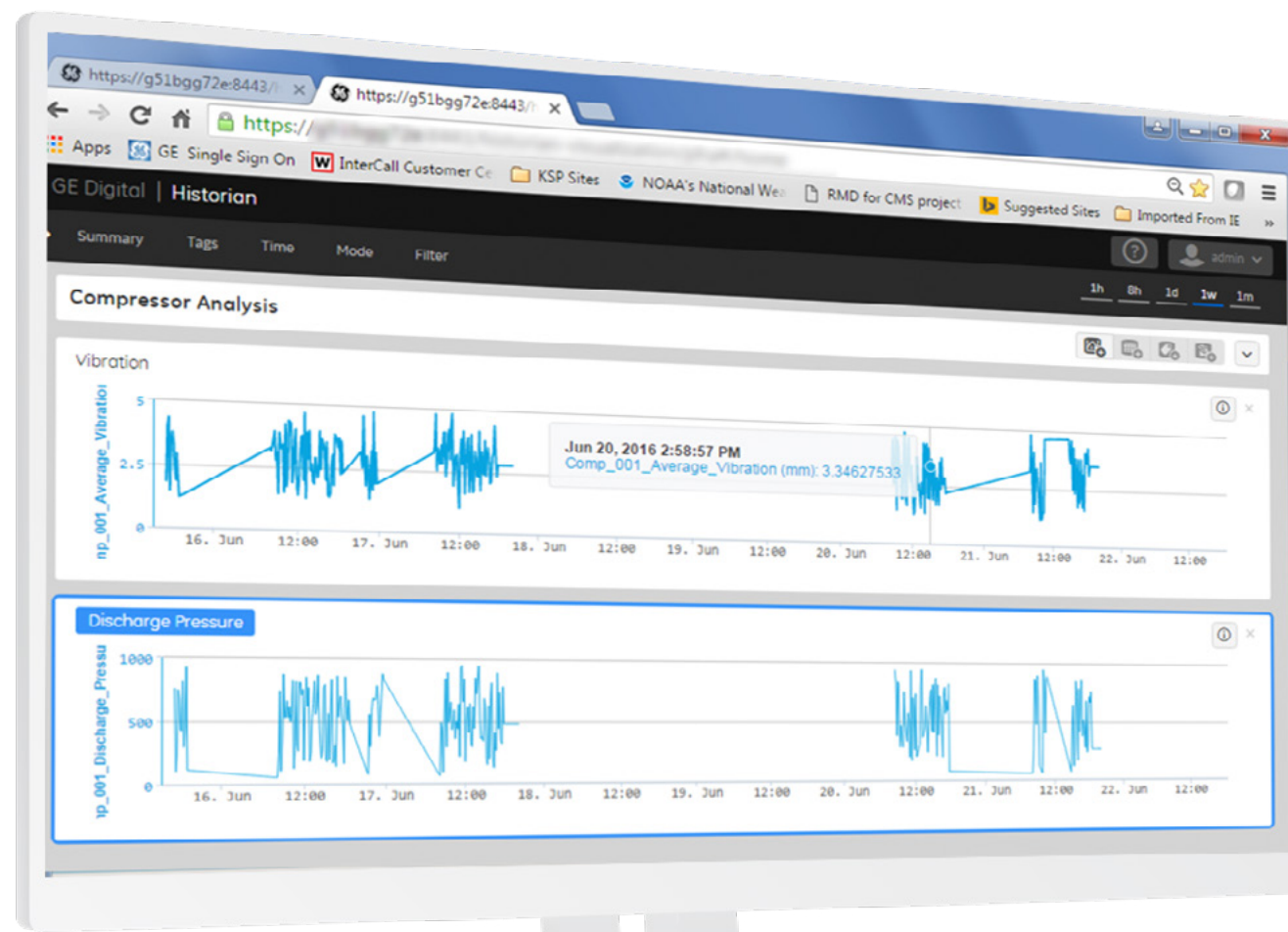
- SQL Server for AEDB: SQL Express, SQL 2012 R2 Standard, SQL 2008 R2 Standard
- OPC HDA Server: OPC HDA Kassl Client, OPC Foundation Client
- OPC Servers for OPC Collectors: 1.0, 2.06s
- OSI PI Server tested for OSI PI Collector: 10
- VMware ESX: 5.5 and 5.1

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

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 GE Digital's Historian.

LEARN MORE

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





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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.

[GlobalCare Support Services](#) Let us help by ensuring that your business continues to operate at its highest efficiency, all while mitigating risks to your investments.

[Worldtech Security Services](#) Our solutions provide industrial-grade security for a wide range of OT network and application topologies.

### Related products

GE Digital's [Asset Performance Management](#) suite helps you move from reactive to proactive maintenance to reduce unplanned downtime, minimize maintenance costs, improve efficiency, and extend asset life.



[Machine & Equipment Health](#) →  
Get a unified view of operations—anytime and anywhere.



[Brilliant Manufacturing](#) →  
Digitize your manufacturing plant or factory to get insights that unlock unprecedented efficiencies and process optimization.

# PREDIX

[Predix](#) →  
Innovate and transform your business with the cloud-based operating system for the Industrial Internet, purpose-built for industry.

### Continue your IIoT journey

Transforming your business requires innovative foundational solutions that lay the groundwork for optimized performance.



[Cyber Security for OT](#) →  
Take the right actions to increase resilience, help ensure safety, and maintain availability across your operational technology (OT) environment.



[iFIX](#) →  
Gain visibility into your operations and secure agility for smarter decision making that drives results.



[HMI and SCADA](#) →  
Precisely monitor, control, and visualize every aspect of your operations, enabling operators to make the best decisions faster.

#### 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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