Proficy Operations Hub for Linux from GE Digital

Speed development of Web-based operations displays with code-free configuration

Enabling collaboration & continuous improvement with centralized visualization and configuration

Proficy Operations Hub for Linux from GE Digital is 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..

With Proficy Operations Hub for Linux, system integrators and in-house engineering teams can leverage powerful, code-free development tools to quickly assemble Web-based applications, enabling connectivity with GE Digital software and common IIoT sources, such as databases and control systems, and delivering High Performance displays for operations. The code-free tools allow multiple, non-developer users to simultaneously contribute custom displays, which reduces costs and speeds development.

Proficy Operations Hub for Linux also provides the ability to connect to a variety of data sources and store the data for initial analysis and visualization. Organizations gain a foundation for insights into operations and productivity, a critical step in the journey to digital transformation.

Outcomes

- Rapid development of Web-based displays for operations
- Faster response and better decision-making with centralized visualization
- Decreased costs and time-to-market for creating Web-based operations applications
- Lower maintenance costs with centralized Web applications
- Information anywhere, any time with responsive design

01 Accelerate development of rich Web applications

Proficy Operations Hub for Linux allows non-developers to quickly assemble displays through a comprehensive library of widgets and arrange them to provide responsive operator visualization. You can easily define data sources and entities for connected devices and create queries to access the data to transform that data into actionable information for operations. Drag-and-drop design allows for simple placement and configuration of visualization components on the display, then dragging the query or data source onto the component quickly enables the data connections.

02 Deliver actionable information through displays for data collection

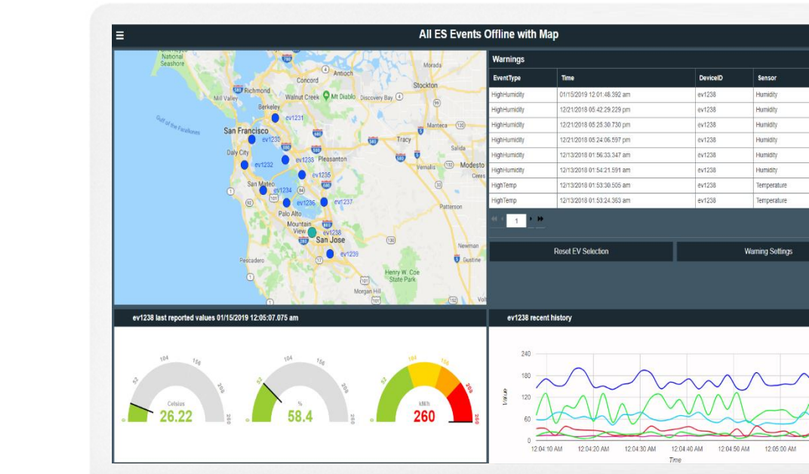
It's easy to create informative displays with graphs, tables, charts, images, video, maps, and more using the extensive widget library. Additionally, Proficy Operations Hub for Linux provides data input widgets for user input to collect data from operators, permitting interaction with the data and sending commands back to connected interfaces. Operators can bring up additional displays related to the data, change context, or enter data manually.

03 Information at your fingertips

Responsive design allows you to build the application, so information is readily available on PC displays, tablets, and mobile phones, allowing access to information and insights into your operations from anywhere, any time.

04 Fast, automatic response

Proficy Operations Hub for Linux allows you to trigger automatic actions based on human events or device data. You can configure actions to drive data queries, send emails, or send commands to devices.



With Proficy Operations Hub for Linux, you can leverage powerful, code-free development tools to quickly assemble High Performance, Web-based applications.

05 Save time with zero deployment clients and centralized management

Leveraging Web technology, Proficy Operations Hub for Linux reduces deployment and maintenance time. The true native Web clients do not require any client installation. Deploying and maintaining have never been easier.

> *"HMI/SCADA software is increasing its role as an integration and business intelligence hub, providing connectivity and visualization to business, engineering, supply chain, and CPM/MES software systems in addition to its traditional display and control role for plant equipment and automation systems located throughout factories and plants globally."*
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> **ARC**

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Features

- Develop, manage, and deliver applications that collect, display, and analyze data from equipment or servers – without needing programming skills
- User-friendly interface with a rich development library
- Trigger action based on values stored in a database table
- Events actions: Send an email (templates included), run a query, and send a command to a device
- Create entities and queries for a relational database
- HTML5 and CSS3 for platform independence
- Access applications using PC displays or mobile devices
- Controlled access to an application and data, based on user roles
- Query Types: Get, Update, Insert, Delete
- Widgets
  - Inputs: Check box, radio button, combo box, text slider, toggle, button, camera, text box
  - Display: Text, images, charts, graphs, grids, data tables, maps, lists, gauges, indicators
  - Layouts: Separators, containers, lines
- Connectivity
  - MQTT: A machine-to-machine protocol using a lightweight publish/subscribe messaging transport
  - REST API: A method of allowing communication between a Web-based client and server

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.

Single Server

- 4-core, 64-bit CPU, 8Gb RAM, 100Gb HDD

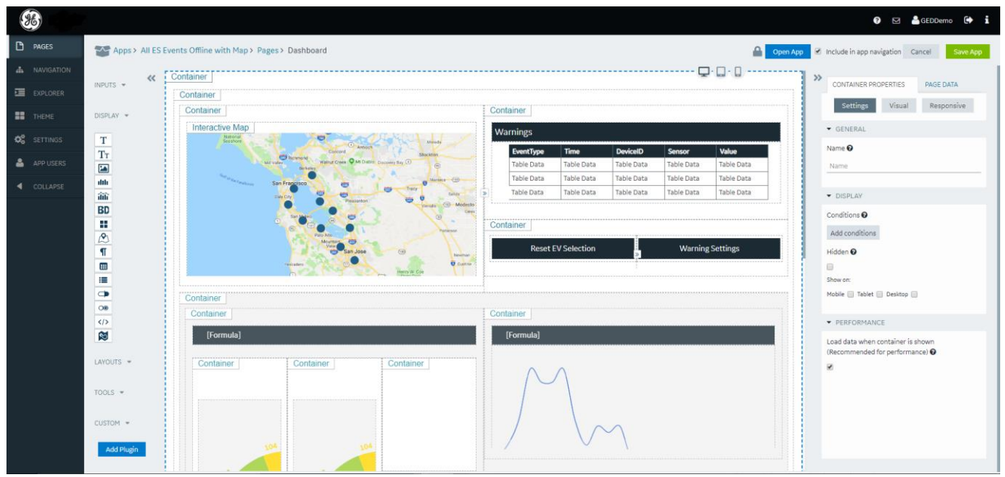
Dual Server: Recommended for production systems

- 1x 4-core, 64-bit CPU, 8Gb RAM, 25Gb HDD for the application server
- 1x 4-core, 64-bit CPU, 8Gb RAM, 100Gb HDD for the DB server
- Actual HDD Capacity depends on required data volumes

Software Requirements

Latest version of Ubuntu Server 16.04 LTS for the platform server

- PostgreSQL v10.5 pre-installed on the DB Server of a dual server system
- PostgreSQL DB can be installed on any OS that supports it



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

Take advantage of a centralized environment for aggregating and visualizing contextual and situational information for industrial applications – without needing IT or coding resources. Proficy Operations Hub for Linux supports rapid application development and rich displays for faster operational response and better decision making.

LEARN MORE

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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 Historian

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

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.

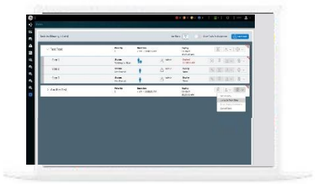
PREDIX

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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