



Predix Ready Cloud Connect 1.0 from GE Digital

Secured connectivity for data at the edge to the cloud

Enabling data management and analysis to meet your business outcomes

[Predix Ready Cloud Connect from GE Digital](#) provides an end-to-end platform that securely connects your data at the edge to the cloud. It provides common data ingestion, connectivity, and asset configuration for Machine & Equipment Health (M&EH), Reliability Management (RM), and Maintenance Optimization (MO), all part of our Asset Performance Management (APM) suite on GE's Predix Cloud.

GE Digital's APM is an integrated suite of software and expert services that connects data from control networks or control systems, remote monitoring, and predictive-maintenance technologies—helping to improve reliability, availability, and performance.

Outcomes

- Helps you get connected with secure-by-design technology, enabling data management and analysis to meet your business outcomes
- Supports asset-model configuration, synchronization, and provisioning
- Enables secure data integrity with support of data store-and-forward capabilities to the cloud
- Helps getting data from multiple different sources, including machine protocols, historians, and industry standards
- Supports transfer of binary and ASCII files from edge to cloud
- Is optimized for Predix software

01 End-to-end connectivity

Cloud Connect provides an end-to-end platform for connecting data at the edge from a variety of sources to the APM application on the Predix Cloud. It is currently deployed via a Windows-based Industrial PC (IPC) hardware that is preloaded with Predix-based software prior to shipment.

02 Subscription-based management

This highly secure-by-design, scalable solution is managed by GE throughout your subscription term. It can send data to the APM application on the Predix Cloud through secure wired or wireless communications.

03 Secure connectivity

Cloud Connect uses HTTPS to create a secure connection to the cloud. With the solution's store-and-forward capabilities, if connectivity is down, the data will be buffered and forwarded when the connection is returned so data is not lost.

04 Data encryption

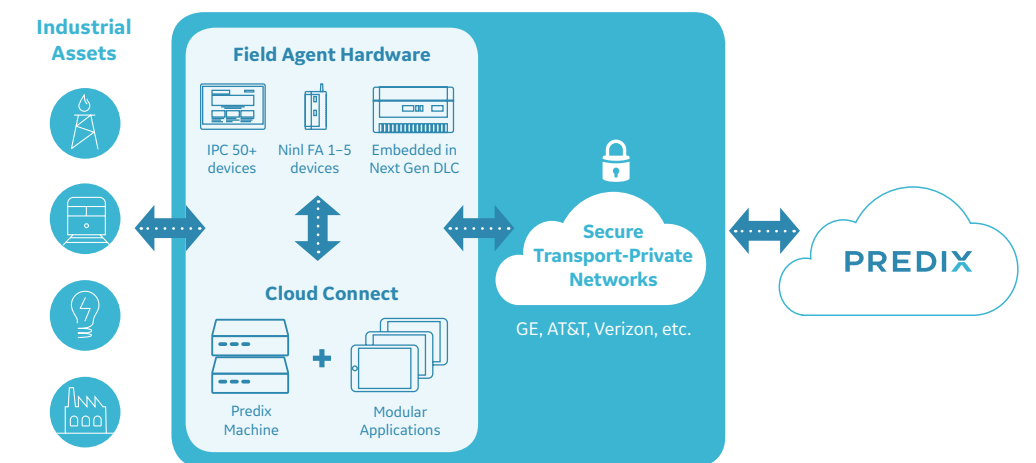
The solution is authenticated via a token service by GE's Predix Cloud before any data is transmitted. Data is encrypted through SSL and TLS using X.509 PKI. The solution has Predix Tunneling encryption technology that uses TLS.

05 Flexible machine and data connectivity

We support the complexities of your network topology and provide flexibility to connect to historians in a plant network or DMZ or to machines in a control network.

06 Asset mapping

With Cloud Connect, your operational data with asset-model context data is segregated in a customer-specific data store on the Predix Cloud, to which customer assets, asset models, and tags are mapped. This allows APM software to visualize, create alerts, and run analytics on your assets in the cloud.



Cloud Connect provides an end-to-end platform for connected solutions.

Getting connected just got easier. With Cloud Connect, you have an end-to-end platform for connecting data at the edge to GE Digital's Asset Performance Management (APM) application on the Predix Cloud.

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Features

- Currently supports time-series data; future plans include support for alarms and events, GIS, work orders, and operations
- Highly scalable for better monitoring and diagnostic applications
- Software deployed on ruggedized industrial computer hardware
- Hardware does not have any unsolicited inbound connections or any listening ports
- Cloud Connect has the capability to talk to a variety of data sources, including:
 - Standards-based protocols such as OPC UA, OPC DA, etc.
 - Machine-specific protocols such as MTConnect and ModBus TCP are supported out of the box. We support over 150 machine protocols that can be configured by professional services on a per need basis.
 - Historian data sources such as GE Digital's Historian and PI Historian

Hardware requirements:

Processor: Via Eden dual core 1.0 GHz processor

Memory: 4 GB RAM

Storage: 32 GB Industrial Grade SSD – Standard

Ethernet: 2 Ethernet (10, 100, 1000 Mbit) ports with separate ethernet controllers

Wireless Communication: WLAN optional via internal Mini PCIe card site

Dimensions (HxWxD): 192 x 116 x 79 mm (7.55 x 4.55 x 3.1 in)

Power: Input—24V DC (±25%) with protection (US plug type included)

Mechanical

- Rugged aluminum housing for optimal thermal management and durability
- Protection against particles based on IP20, flat mounting

Features

- Timer (IO Hub integrated): Legacy PC AT
- High-precision event timer
- Watchdog (IO Hub integrated)
- Temperature sensors: CPU die—Software readable (-15°C to +105°C)
- Internal box temperature with status LED for over-temperature
- Real-time clock: RTC 146818 compatible, Li-battery

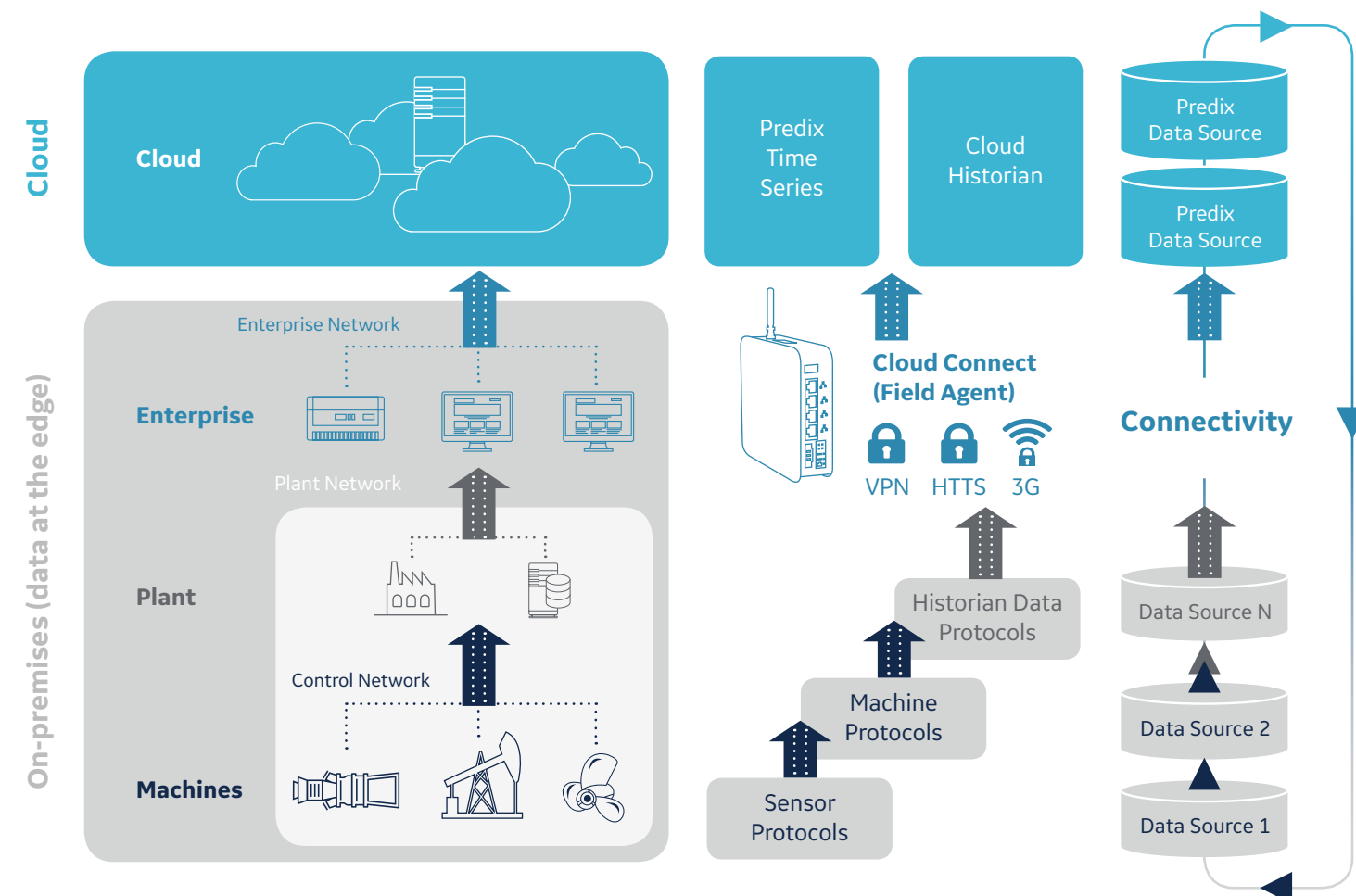
Environmental

Device	Operating	Storage
SSD	-25°C to +65°C	-40°C to +85°C
HHD	0°C to +50°C	-40°C to +85°C
Humidity	5–95°C @ +40°C	5–95°C @ +40°C
Altitude	15,000 ft (4.5 km)	40,000 ft (12 km)

Software requirements:

Microsoft Windows 7 64-bit Professional

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



We are constantly adding more capabilities so you can easily expand and add to your subscription services as your business needs grow.

[LEARN MORE](#)

Cloud Connect supports getting data from different network topologies, including control, plant, or enterprise networks.



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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 team will help develop a collaborative, multi-generational plan that will marry your existing investments to the right process 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.

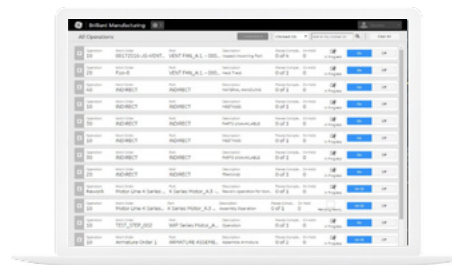
[Worldtech Security Services](#) Our solutions provide industrial-grade security for a wide range of OT network and application topologies.

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.



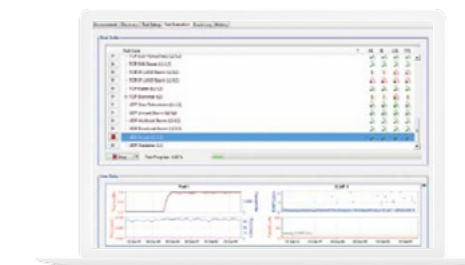
[Brilliant Manufacturing](#) →
Digitize your manufacturing plant or factory to get insights that unlock unprecedented efficiencies and process optimization.

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

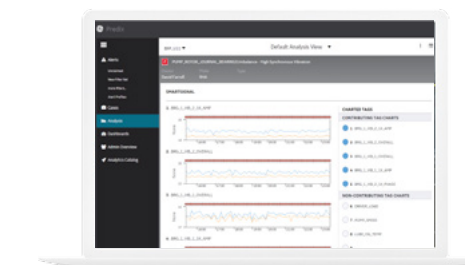
PREDIX

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.



[Reliability Management](#) →
Detect and diagnose equipment problems before they happen, and reduce unplanned downtime and maintenance costs.

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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