Mind your digital future

MindSphere – Siemens Cloud for Industry

siemens.com/mindsphere
MindSphere allows you to use MindApps – apps developed specially for MindSphere for predictive maintenance, energy data management or resource optimization.

With MindSphere, machine and plant builders can monitor globally distributed machine fleets for service purposes and use the data to develop new service and business models.

Data-based services from Siemens (such as Machine Tool Analytics, Drive Train Analytics, Energy Analytics, Process Data Analytics).

Our open interface allows you to connect your industrial assets – machines, plants or entire fleets – simply, securely and regardless of manufacturer.

MindSphere is running on SAP HANA Cloud Platform.

Secure and encrypted transfer of your data to MindSphere.

With MindConnect Nano, you capture your machine and plant data and transfer it securely to MindSphere.
Connectivity

With MindConnect, Siemens offers numerous possibilities for connecting machines, plants and worldwide fleets to MindSphere, regardless of the manufacturer. MindConnect Nano for instance is a Plug&Play solution that enables you to read out data from your industrial asset and pre-process it for transfer to MindSphere - simply and reliably. The encrypted data is then transferred securely to MindSphere, where it is then available for your analysis.

Options for connection to MindSphere:

- MindConnect Nano
- MindConnect IO T 2040
- MindConnect Software
- Integration in SIMATIC and other Siemens products
- Further options already in progress

Open interfaces

MindSphere is designed as an open ecosystem, making it possible to exchange data across company boundaries and to connect a wide range of different products. Thanks to open standards and interfaces, data can be gathered from industrial equipment of many different manufacturers and analyzed in MindSphere.

Data sources:

- SIMATIC S7-300 / S7-400 / ET 200S
- SIMATIC S7-1200 / S7-1500
- OPC UA
- Modbus
- Others in progress
Applications

The Siemens MindApps Fleet Manager and Visual Analyzer are already available on MindSphere. These apps help users to connect their machines, plants and other industrial assets to MindSphere, to configure them, to read out and to visualize the relevant data for analysis. Further applications are already in the pipeline and will be made available to users on an ongoing basis. MindSphere also offers the option of developing dedicated applications and using them on MindSphere as well as offering them to other users. The possibilities here are practically unlimited.

Use MindApps from Siemens and apps from other developers for:

- Predictive maintenance
- Energy Data Management Services
- Resource optimization
- Online monitoring of globally distributed machines
- and a lot more

Digital Services

In increasingly dynamic markets with ever more complex production requirements, data can make the difference between the success or failure of a company.

With MindSphere, Siemens is paving the way to digital services. These services offer a competitive advantage for customers through the use of data in the form of higher availability of individual machines, entire plants and systems and globally distributed machine fleets as well as improved productivity and efficiency.

MindSphere provides the technological platform for digital services from Siemens and 3rd party suppliers, and combines a number of established and new technologies for data analysis, reliable connectivity and cyber security.
Processing of large volumes of data plays a major role particularly in companies with software-based manufacturing – the so-called digital enterprise. The open platform MindSphere – Siemens Cloud for Industry provides a cost-efficient virtualized data management system for this purpose.

Cutting throughput times, increasing flexibility, enabling individualized mass production and optimizing consumption of energy and resources are some of the challenges facing manufacturing companies today. They have to optimize the entire value chain, from design, production planning and engineering to services. This also entails analyzing the vast amount of collected data – big data – and recognizing what is really important to enable the right decisions to be made in good time.

MindSphere – Siemens Cloud for Industry connects actual production with the virtual world. To do this, all data defined by the user is first of all captured, for example using MindConnect Nano, and transferred to MindSphere at defined time intervals. The data is analyzed in MindSphere and the data relevant for optimization is made available in the form of recommendations for action. With this so-called smart data the efficiency of production can be increased and the full potential of the plant utilized.

MindSphere provides the capability for developing digital services, applying them and making them available to other users. In this way, totally new service and business models are possible.
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