

MindSphere Add-ons Product Sheet



MindSphere Add-ons enhance MindSphere Capability Packages according to your use case by adding capabilities on demand.

Prerequisites

Subscription

A valid subscription to a MindSphere Capability Package (Basic/Standard/Premium) is required.

Asset Health & Service Hub Application

Prerequisites

For the use of this Offering, a valid subscription to Remote Service and Edge Analytics is required.

Description

Asset Health & Service Hub Application enables you to remotely track, detect, analyze and repair issues in the field before they harm machines or disrupt operations.

Third-Party Terms

The Third-Party Terms for Asset Health & Service Hub Application are made available via the following web link:
<https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/Third-Party-Terms>.

Documentation

For further details about Asset Health & Service Hub Application please see MindSphere Documentation available via the following weblink:
<https://siemens.mindsphere.io/en/docs/Asset-Health-and-Service-Hub.html>.

Cloud Foundry Hosting

Description	<p>We offer a managed runtime environment powered by Cloud Foundry to run your own applications. Cloud Foundry is a platform as a service (PaaS) providing a development and production environment within MindSphere. Cloud Foundry Hosting enables you to create and host practically everything from simple cloud-based IoT dashboards to sophisticated enterprise applications.</p> <p>Your subscription to Cloud Foundry Hosting includes access to 2 so-called Cloud Foundry Orgs (one for your Production Environment and one for your Development Environment). Every Org provides a dedicated login to a Cloud Foundry environment that an individual or multiple collaborators can use. Each Cloud Foundry Org comes with 2 GB of RAM per default (can be upgraded for additional fees).</p> <p>Your subscription to Cloud Foundry Hosting allows you also to utilize any available size (e.g. XS or M) of Backing Services. The size relates to available memory, storage space and additional properties such as high availability. A usage-based fee will be charged depending on the size of Backing Services in use as set forth in the Price List for Offerings with Usage-based Fees available at https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/usage-based.</p> <p>Backing Services include any service which an application utilizes over the network as part of its normal operation. You can utilize Backing Services e.g. for storage, caching, messaging etc. Available service types are: ElasticSearch, LogMe, PostgreSQL, RabbitMQ, Redis.</p>
Documentation	<p>For further details about Cloud Foundry Hosting please see MindSphere Documentation available via the following weblink: https://developer.mindsphere.io/paas/index.html.</p>

Dashboard Designer

Description	<p>Dashboard Designer enables you to create simple & advanced Grafana based dashboards from IoT data. It is accessible directly from the MindSphere Launchpad. The following Grafana visualization panels are available, e.g. Alert List, Bar Gauge, Clock, Dashboard List, Gauge, Graph, Heatmap, Pie Chart, Separator, Singles Table, Text. Additionally, the following third party visualization plugins are available, e.g. Breadcrumb, Imagelt, Cal-Heatmap, SVG, Traffic Lights. Those visualization panels can be combined into dashboards.</p> <p>Dashboard Designer can be subscribed to in different types (Creator/ Viewer) of Authorized Users. An Authorized Creator User can create view, modify and delete existing dashboards. An Authorized Viewer User can view existing dashboards.</p> <p>Your subscription to Dashboard Designer includes 5 Authorized Creator Users; additional upgrade subscriptions to upgrade the number of Creators or to subscribe to Dashboard Designer as Viewer are available separately for an additional fee.</p>
Limitations	<p>Please note that creating dashboards by Authorized Creator Users, certain technical limitations may apply. For more information, please refer to</p>

	https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/technical-limitations .
Third-Party Terms	Third-Party Terms for the Dashboard Designer are available under “Dashboard Designer” via the following web link: https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/Third-Party-Terms .
Documentation	For further details about Dashboard Designer please see MindSphere Documentation available via the following weblink: https://siemens.mindsphere.io/content/dam/mindsphere/terms/html/ThirdPartyTerms_DashboardDesigner_ReadMe_OSS_v1.0.html .

Edge Analytics

Description	<p>Edge Analytics allows you to collect high frequency data, pre-process raw data and use an analytic edge functionality to calculate your KPIs. These KPIs allow condition monitoring (e.g. vibration analysis) of your asset. Your subscription to Edge Analytics comprises (i) a subscription license to the Edge Analytics Engine software for use on your connectivity hardware in the field to collect data and perform edge analytics of the data to calculate KPIs and send the calculated KPIs to the Platform, and (ii) a subscription to the application Edge Analytics on the Platform that allows you to configure your data points and KPIs on your Account.</p> <p>The Edge Analytics Engine software will be made available for download on the Platform and must only be used on supported connectivity hardware. The MindConnect Nano, MindConnect IoT2050 and MindConnect Software Agent from Siemens are currently supported connectivity hardware. For further information as to which connectivity hardware is currently or will be supported, please verify with your MindSphere sales representative.</p> <p>This Offering is available in three different sizes. Depending on the size ordered, the subscription includes 5, 50 or 300 external data points and can be used for 1 connectivity hardware device, e.g., MindConnect Nano.</p> <p>You can also use the trial mode for up to 5 external datapoints to explore and test the Edge Analytics functionalities within 7 days. After expiration, the Edge Analytics Engine needs to be restarted again.</p>
Third-Party Terms	<p>Third-Party Terms for Edge Analytics are available within Industry Online Support via the following web links:</p> <p>MindConnect IoT2050: https://support.industry.siemens.com/cs/ww/en/view/109813714</p> <p>MindConnect Nano: https://support.industry.siemens.com/cs/us/en/view/109745561</p> <p>MindConnect Software Agent: https://support.industry.siemens.com/cs/us/en/view/109809640</p> <p>Third-Party Terms for Edge Analytics are integrated into MindConnect firmware, therefore the above mentioned web links will depend on the MindConnect products you are using.</p>
Documentation	For further details about Edge Analytics please see MindSphere Documentation available via the following weblink: https://documentation.mindsphere.io/resources/html/mindconnect-edge-analytics/en-US/index.html .

Intralogistics Hub

Description	<p>Intralogistics Hub helps you to optimize your intralogistics processes through the calculation of relevant parameters and to monitor your material channel health. The application enables you to reduce material-related downtimes and to better understand your internal material supply.</p> <p>Intralogistics Hub offers the following core capabilities:</p> <ul style="list-style-type: none"> • Calculation and visualization of material replenishment and consumption times on material channels to gain insights into your production process.
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	<ul style="list-style-type: none"> • Automatic detection and issue generation using different scenarios to increase the uptime of the material supply. The following issues are automatically tracked: <ul style="list-style-type: none"> ▪ Empty material channels ▪ Material channels below the minimum fill level ▪ Material out of position ▪ Consumption time is quicker than the replenishment time • Automatic exclusion of useless datapoints, e.g. replenishment or consumption times over the weekends. • Overview dashboard to provide the current factory dashboard. <p>Your subscription to Intralogistics Hub includes 50 Users and 100 Material Channels, for which the replenishment and consumption times can be calculated, and the issues being tracked. Material Channel is defined as logical group of sensors which can indicate if a position in the material channel is filled or empty. Additional upgrade subscriptions to upgrade the number of Users or Material Channels are available separately for an additional fee.</p>
Third-Party Terms	The Third-Party Terms for Intralogistics Hub are made available via the following web link: https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/Third-Party-Terms .
Documentation	For further details about Intralogistics Hub please see MindSphere Documentation available via the following weblink: https://documentation.mindsphere.io/MindSphereApps/Intralogistics-Hub/introduction.html .

MindConnect Advanced Driver Extension

Description	MindConnect Advanced Driver Extension is an optional extension to the MindConnect Software Agent and MindConnect IoT2050. A subscription to this extension allows you to use additional adapters within the supported hardware devices and to enable various additional supported field protocols such as S7+, IEC61850, or SINUMERIK PL.
Limitations	With your subscription to this extension, we grant you the non-transferable, non-sublicensable, and revocable right to use, and permit Third Parties to use, the extension for using one adapter within one supported hardware device during the Subscription Term.
Documentation	For further details about MindConnect Advanced Driver Extension see MindSphere Documentation available via the following weblink: https://documentation.mindsphere.io/resources/html/getting-connected/en-US/146436770955.html .

MindConnect Integration

Description	<p>MindConnect Integration allows you to connect third party on-premise systems and third party cloud-based services to your Account on the Platform, for which we make an adaptor on the Platform available via MindConnect Integration. An "Integration" is a link established by you between the Platform and an interface of (i) an "On-Premise System", i.e. a software system running on-premise in your private data center, or (ii) a "Cloud-Based Service", i.e. a service running on a public cloud infrastructure other than the Platform.</p> <p>Installation assistance and consulting regarding MindConnect Integration are offered for an additional fee in the form of Professional Services.</p>
Limitations	On-Premise Systems and Cloud-Based Services are not part of our Offering. It is your responsibility to procure and maintain appropriate licenses for such On-Premise Systems and Cloud-Based Services and their integrations with the Platform. On-Premise Systems, Cloud-Based Services and their integrations are solely operated by you. On-Premise Systems and

Cloud-Based Services currently supported are listed below (subject to change and for informational purposes only; please verify with your MindSphere sales representative):

Supported On-Premise Systems	Ariba, OnRamp, LotusNotes, OFTP, Oracle, PeopleSoft, Remedy, SAP, SAP XI, Siebel, AS/400, JavaBeans, JDBC, Apache HIVE, MongoDB, Cassandra, HDFS, Apache Impala, Apache WebSphereMO, Tuxedo, MSMQ, Apache Kafka
Supported Cloud-Based Services	FTP(S), SOAP, REST, OData 2.0, OData 4.0, Alfabet, Cumulocity, Apps, BigQuery, Calendar, Cloud Storage, Contacts, Drive, Cloud Pub/Sub, Sheets,S3, SNS, SQS, Apache Solr, AvaTax, Concur, Coupa, Magento, Marketo, Microsoft Dynamics, NetSuite, SAP Cloud, SAP Hana Marketing Cloud, Salesforce, Salesforce CRM, ServiceNow, Slack, Strikelron, SuccesFactors, SugarCRM, Zendesk

Integration Software. To connect an On-Premise System to the Platform, certain third party software must be installed on a server on-premise in your data center (“**Integration Software**”). You can only onboard your On-Premise System if the Integration Software has a connection to the internet.

Integration Software is not part of our Offering and is solely operated by you. It is your responsibility to procure and maintain appropriate licenses for such Integration Software. We will direct you to the website of a third party vendor, where Integration Software is available for your download via the internet. Separate terms and conditions apply to the download and installation of Integration Software. We will provide you with third party license keys for such Integration Software to enable your use of the Integration Software in connection with the Offering, limited to bi-directional communication of data between Integration Software and your Account. Integration Software may contain a mechanism to disable its use after the end of the Subscription Term to MindConnect Integration and you will not interfere with the date and time of such disabling mechanism. We may, at our sole discretion, make available software updates or security patches for Integration Software and will provide reasonable notice when such updates or security patches are available. You shall update the Integration Software without undue delay after the publication of any updates and patches. Please note that data collected during an update procedure may be lost. Separate terms and conditions may apply to the download or installation of such updates or security patches. Integration Software with older firmware may not be able to be updated to the current version. An outdated version of Integration Software may not be able to transmit data to the Platform.

Third-Party Terms

Third-Party Terms for MindConnect Integration are available via the following web link: <https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/Third-Party-Terms>.

Documentation

For further details about MindConnect Integration please see MindSphere Documentation available via the following weblink: <https://documentation.mindsphere.io/resources/html/mindconnect-integration-gs/en-US/index.html>.

OEE Hub

Description

OEE Hub allows you to calculate Overall Equipment Effectiveness (OEE) and additional KPIs for lines and machines, in order to better understand the efficiency of underlying production processes and to be able to continuously improve. Additionally, it also helps the user to track the success of measures taken.

OEE Hub offers you the following core capabilities:

- Calculate OEE, Mean Time To Repair (MTTR), Mean Time Between Failure (MTBF) and further relevant KPIs for machines and lines
- Filter capabilities for timeframe, products, and orders

	<ul style="list-style-type: none"> • Support of single- and/or multiproduct production systems • Reason tree modeling and ability to change recorded downtime reasons afterwards • Customization of OEE formulas for OEE calculation • Set up production times, breaks, maintenances etc. in calendars <p>The subscription includes an initial quota of 25 assets, for which the OEE calculation can be set up, and 50 named users. Additional OEE assets or named users can be upgraded for additional fees.</p> <p>Your subscription to OEE Hub includes 25 Assets and 50 Users. Additional Assets and Users can be upgraded for additional fees.</p>
Third-Party Terms	<p>The Third-Party Terms for OEE Hub are made available via the following web link: https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/Third-Party-Terms.</p>
Documentation	<p>For further details about OEE Hub please see MindSphere Documentation available via the following weblink: https://documentation.mindsphere.io/MindSphere/apps/OEE-Hub/introduction.html.</p>

Predictive Learning

Description	<p>Predictive Learning allows you to build predictive models through machine learning techniques, enabling companies to optimize product quality as well as reduce potential field failures and performance issues. You can employ machine learning algorithms including Naive Bayes, Random Forest, Logistic Regression, Decision Trees, Gradient Boosting, Support Vector Machines and others. It also allows you to build and execute predictive models in Python. You can import data to Predictive Learning from an AWS S3 storage, or from Integrated Data Lake. Asset-related time series data can also be imported to Predictive Learning from the Platform.</p> <p>Predictive Learning is available as:</p> <ul style="list-style-type: none"> • Predictive Learning Essentials: Your subscription to Predictive Learning Essentials enables you to create and use machine learning solutions written in Python and includes 1 000 Predictive Learning Compute Hours. Additional Compute Hours can be upgraded for additional fees.
Third-Party Terms	<p>Pre-installed open source libraries are listed in the Third-Party Terms available via the following web link: https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/Third-Party-Terms. Further libraries can be procured by you under separate terms via download from external repositories, i.e. pip (https://pypi.org/project/pip/) for Python. Such libraries are not part of our Offering and solely operated by you.</p>
Documentation	<p>For further details about Predictive Learning please see MindSphere Documentation available via the following weblink: https://documentation.mindsphere.io/resources/html/predictive-learning/en-US/Welcome.htm#t=Welcome_1.htm.</p>

Quality Prediction Hub

Description	<p>Quality Prediction Hub represents a solution for production managers, quality engineers, manufacturing engineers and machine operators to discover complex relationship between production machine parameters and resulting product quality with application of Machine Learning (ML) technique. The ML model of the process established in the application is used to predict resulting product quality characteristics with input of actual manufacturing parameters in real time before a defect and quality loss occurs.</p> <p>Key capabilities of the solution:</p> <ul style="list-style-type: none"> • Automatic prediction of the quality results by production data analytics
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	<ul style="list-style-type: none"> • Selection of machine data, quality data and ML model parameters with user interface in wizard form • Visualization of machine and quality data including run-time charts, distribution histograms and correlation map • Automatic pre-processing, aggregation and feature generation for machine and quality data • Automatic training of selected ML model to solve regression problem for quality prediction • Visualization of prediction results with true vs. predicted values chart, feature importance diagram and model accuracy analysis • Output of predicted quality results in relation to specified tolerances <p>Your subscription to Quality Prediction Hub includes 3 Prediction Models and 50 Users. Additional Prediction Models and Users can be upgraded for additional fees.</p>
Third-Party Terms	<p>The Third-Party Terms for solution are available under the link: https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/Third-Party-Terms.</p>
Documentation	<p>For further details about Predictive Learning please see MindSphere Documentation available via the following weblink: https://documentation.mindsphere.io/MindSphere/apps/qualitypredictionhub/introduction.html.</p>

Remote Services

Description	<p>Remote Services provides customer-owned apps with tunnel-based encrypted network-to-network access for using IP-based protocols under fine-grained access control. Such networks may either be "Service Networks" or "Device Networks". Service Networks host apps and data on computers or servers, Device Networks host apps and data located on computers or embedded systems being part of machinery.</p> <p>Example use cases are: The Remote Services application helps you to perform remote maintenance and engineering of machine controllers in a Device Network or to access a camera video stream. Furthermore, apps on machinery in Device Networks may issue tickets or access data storage. Beyond that apps in Device Networks may integrate with apps or data on MindSphere.</p> <p>Remote Services comes with two user interfaces: Remote Services v1 providing a functional approach allowing fast switching between all Remote Services functionalities; Remote Services v2 providing a workflow-driven approach for everyday tasks.</p> <p>The application provides the following capabilities:</p> <ul style="list-style-type: none"> • Leverage preconfigured native or browser-based remote login protocols from within Service Networks to devices located in Device Networks. Fine-grained access control ensures that users have access only to those devices, which are assigned to them by an administrator. <ul style="list-style-type: none"> ▪ Your subscription comprises access to 1 "Service Device", 0.01 GB of monthly "Service Data" transfer and 1 "Service Tunnel". Additional Service Devices, Service Data volume and Service Tunnels can be upgraded for additional fees. ▪ "Service Devices" are devices registered with the Remote Services application for the purpose of being accessed. ▪ "Service Data" means all data transfer related to usage or administration of the application functionalities. ▪ "Service Tunnel" means hosting of one Service Asset-specific communication protocol in a tunnel. • Route custom IP-based protocols from Service Networks to Device Networks. Example use cases are remote engineering and commissioning of Service Devices by using customer-provided tools from within a Service Network instead of within a Device Network. Furthermore, IP-based streams may be accessed. • Route custom IP-based protocols from Service Devices in Device Networks to apps or data located in Service Networks. Example use cases are access to ticketing systems or data
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	storage. Furthermore, apps on Service Devices may integrate with apps or data on MindSphere.
Limitations	<p>Endpoint (Client) Software. Remote Services requires installation of, and we grant you a Perpetual license to, (i) a Device Endpoint (technically a device client) for establishing Service Tunnels with Service Devices located in Device Networks and which may also be used as a gateway for accessing Service Devices in sub-networks, and (ii) a Service Endpoint (technically an operator client) for establishing Service Tunnels with computational devices (such as a technician's PC or a server) located in Service Networks. Both Endpoints (clients) will be made available for download from the Platform.</p> <p>For details regarding validated hardware and software configurations for Service and Device Endpoints, please see the MindSphere Release Notes available via the following weblink: https://documentation.mindsphere.io/resources/html/release-notes/en-US/index.html.</p>
Third-Party Terms	Third-Party Terms for Remote Services v1, Remote Services v2 and Service and Device Endpoints (clients) are available under "Remote Services" via the following web link: https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/Third-Party-Terms .
Documentation	For further details about Remote Services please see MindSphere Documentation available via the following weblink: https://siemens.mindsphere.io/en/docs/MRS-Getting-Started .

Subscription Based Notifications for Time Series Data & Events

Description	This feature facilitates MindSphere to send notifications to the subscribing Environments when new Time Series data or Events arrive. Apps can be configured to listen to these notifications for polling the subscribed data more efficiently. Thus, eliminating the need for cyclic polling.
Pre-requisites	For existing applications, this feature needs modifications in the app by the app developer. For new applications, the use of Subscription Based Notifications must be planned beforehand during design phase.
Limitations	The notifications work with a minimum window of 1 minute. Currently the apps outside the MindSphere ecosystem are not supported. Works only with latest Message Broker Service Version.
Documentation	<p>How to Receive Notifications (App Development/Publish): https://developer.mindsphere.io/howto/howto-receive-notifications.html.</p> <p>Message Broker API: https://developer.mindsphere.io/apis/core-messagebroker/api-messagebroker-api.html.</p>

Visual Explorer

Description	<p>Visual Explorer enables you to visualize certain parts of Customer Content. Such visualizations can be combined into dashboards, which may be used to analyze the performance of connected assets. Your subscription to Visual Explorer includes 5 GB of storage volume to save your data sources and visualizations. Visual Explorer can be subscribed to in different types (Creator/ Viewer) of Authorized Users.</p> <p>A <i>Creator</i> can access the Visual Explorer application, which is built on Tableau®, and the supplemental tool <i>Visual Explorer – Connector</i> from the MindSphere Launchpad. Visual Explorer – Connector can be used to select Assets and Aspects and transform those into data sources, which can later be used to create visualizations with the Visual Explorer main application. The Visual Explorer main application further enables you to create or publish a workbook (i.e. a</p>
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	<p>combination of visualizations and dashboards), modify an existing workbook or create subscriptions, alerts or comments on a published workbook.</p> <p>A <i>Viewer</i> gets access to a subset of features and functionalities via the Visual Explorer application. A <i>Viewer</i> may interact with or export an existing visualization but may not use <i>Visual Explorer – Connector</i>.</p> <p>Your subscription to Visual Explorer includes 5 <i>Creators</i>; additional upgrade subscriptions to upgrade the number of <i>Creators</i> or to subscribe to Visual Explorer as <i>Viewer</i> are available separately.</p>
Third-Party Terms	<p>Third-Party Terms for the Visual Explorer main application and Visual Explorer – Connector are available under “Visual Explorer” via the following web link: https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/Third-Party-Terms.</p>
Documentation	<p>For further details about Visual Explorer please see MindSphere Documentation available via the following weblink: https://siemens.mindsphere.io/en/docs/Visual-Explorer.</p>

Export Control Regulations

The Offerings described in this MindSphere Add-ons Product Sheet have the following classification, unless expressly set out otherwise herein:

AL	N
ECCN	N/EAR99

Security Information

General	In order to protect plants, systems, machines and networks against cyber threats, it is necessary that you implement and continuously maintain a holistic, state-of-the-art industrial security concept.
Secure communication	Data transmission will be done via HTTPS protocol from Asset to your Account.

Definitions

General	Unless otherwise indicated, capitalized terms used in this document shall have the meaning given to them in this document or elsewhere in the Agreement. You may also want to check our Glossary .
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