SIEMENS

# MindSphere Cloud Resources
## Product Sheet

MindSphere cloud resources ("MindSphere Cloud Resources") empower you to use MindSphere capabilities. MindSphere Cloud Resources Packages provide the resources required to use the various capabilities and functionalities provided either in a MindSphere Capability Package or as a MindSphere Add-on Offering.

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

| Description | |
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| General | MindSphere Cloud Resources are offered as either mandatory or optional MindSphere Cloud Resources Package.<br>Mandatory MindSphere Cloud Resources (also referred to as "IIoT Data Package") contain the necessary resources for the utilization of the MindSphere Capability Packages and are available in five different sizes (XS/S/M/L/XL), from starting simple use cases (XS) towards high end resource requirements in XL size.<br>Optional MindSphere Cloud Resources Packages are needed for specific use cases and are required to consume/use the respective capabilities. They are available in three different sizes (S/M/L).<br>You select the best fitting MindSphere Resources Package for your use cases and demands. |
| Limitations and usage-based fees | You are only authorized to utilize the MindSphere Cloud Resources Package size to which you hold a valid subscription. Only one size of MindSphere Cloud Resource Package can be subscribed to for one MindSphere Capability Package.<br>The resources included in the MindSphere Cloud Resources Packages have certain limits as outlined in the table below. The table indicates if limits are either monthly recurring or apply for the entire Subscription Term.<br>Should the actual usage of your MindSphere Cloud Resources Package size exceed the applicable limits below, usage-based fees will be charged on a monthly basis as set forth in the Price List for Offerings with Usage-based Fees available at https://siemens.mindsphere.io/en/docs/Product-Descriptions- |

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| | Overview/usage-based. An exception applies to the following limits of MindSphere Cloud Resources which you may not exceed:<br>• Data Registries included in the optional Semantic Data Interconnect Resources Package (see table below). Data Registries can be upgraded for additional fees.<br>• Events included in the mandatory IIoT Data Package (see table below). To clarify whether such limitations can be increased please contact MindSphere Support.<br>• Event Types included in the mandatory IIoT Data Package (see table below). To clarify whether such limitations can be increased please contact MindSphere Support.<br>• Forecast Executions included in the mandatory IIoT Data Package (see table below). Forecast Executions can be upgraded for additional fees.<br>• Anomaly Detection Executions included in the mandatory IIoT Data Package (see table below). Anomaly Detection Executions can be upgraded for additional fees.<br><br>Please note that depending on your usage certain technical limitations may apply in addition to the limits set out in the tables below. For more information, please refer to https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/technical-limitations. To clarify whether such technical limitations can be increased please contact MindSphere Support. |
| Payment Terms | The subscription fee for mandatory and optional MindSphere Cloud Resources Packages is charged yearly in advance. If your usage exceeds the authorized limits, we will charge you for the excess usage monthly in arrears. |
| Calculation of usage-based fees | The following calculation methods apply to usage-based fees of:<br>• MindSphere Cloud Resources included in (i) IIoT Data Package (Analytics API Calls, Notification Emails/Mobile Push/SMS, Operations Insight Analytics – Processed Data (using IDL), Visual Flow Creator Compute Hours), (ii) Integrated Data Lake (maximum volume of read data, maximum volume of write data, maximum number of read operations, maximum number of write operations, maximum number of search operations) and (iii) Semantic Data Interconnect (SDI Outbound Traffic, SDI Query Executions): the calculation is based on cumulative usage over a month in the same Account.<br>• MindSphere Cloud Resources included in (i) IIoT Data Package (File Storage, Operations Insight Analytics - KPIs (using aggregated time series data), Operations Insight Rules, Operations Insight simple KPIs, Time Series Data Ingest Rate, Time Series Data read/compute, Time Series Data Storage) and (ii) Integrated Data Lake (total number of objects stored, maximum data storage): the calculation is based on the average of maximum daily usage over a month in the same Account.<br><br>For clarity, please note the following examples for the two different calculation methods:<br>• Example No.1 (cumulative usage): You have subscribed to the IIoT Data Package XS size which allows you to use e.g. 3 Visual Flow Creator Compute Hours per month. If you use 15 hours in a month, a usage-based fee for a total number of 12 hours would be charged for that month.<br>• Example No. 2 (average of maximum daily usage): You have subscribed to the IIoT Data Package S size which allows you to use e.g. 20 Operations Insight Rules during the entire Subscription Term of 12 months. In the first month of the Subscription Term your usage is as follows: on each of the first 15 days |

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| | you have reached a maximum daily usage of 10 rules. On each day during the next 5 days you have reached a maximum daily usage of 25 rules. On each day during the next 3 days you have reached a maximum daily usage of 10 rules. And on each day during the last 7 days of the month, you have reached a maximum daily usage of 50 rules. In this case the average of maximum daily usage over a month would be (15*10+5*25+3*10+7*50)/30= 21,8. Since 20 rules are already included in your subscription, a usage-based fee for 1,8 rules would be charged for the first month. The same calculation (based on the average of maximum daily usage over a month) will be applied in the remaining 11 months of the Subscription Term. |

## Mandatory MindSphere Cloud Resources Package - Overview

The MindSphere Cloud Resources included in the mandatory MindSphere Cloud Resources Packages in the table below have limits which apply for the entire Subscription Term, unless expressly indicated as 'monthly' limit.

For clarity, please note the following example: If you have subscribed to IIoT Data Package size M for the Subscription Term of 12 months, you are allowed to ingest and store in total 240 GB time series data into the Platform during the whole Subscription Term. If you use your total purchased 240 GB before the end of your Subscription Term and continue to ingest and store data to the Platform during the Subscription Term, you will be charged for the excess usage monthly in arrears. For Operations Insight Analytics – Processed Data (using IDL) you can incrementally query 20 TB size of files from IDL every month. In case you exceeded this limit in a certain month, you will be charged for the excess usage for that month. In the next month your authorized limit will be reverted to 20 TB.

| IIoT Data Package | XS | S | M | L | XL |
|---|---|---|---|---|---|
| Analytics API Calls (monthly) | 500 | 500 | 500 | 500 | 500 |
| Events | 50 000 | 150 000 | 500 000 | 1 250 000 | 2 500 000 |
| Event Types | 10 | 25 | 50 | 100 | 150 |
| File Storage | 12.5 GB | 50 GB | 200 GB | 800 GB | 3 200 GB |
| Forecast Executions | 20 | 20 | 20 | 20 | 20 |
| Anomaly Detection Executions | 20 | 20 | 20 | 20 | 20 |
| Notification Emails (monthly) | 1 000 | 4 000 | 16 000 | 64 000 | 256 000 |
| Notification Mobile Push (monthly) | 1 000 | 4 000 | 16 000 | 64 000 | 256 000 |
| Notification SMS (monthly) | 0 | 0 | 25 | 100 | 400 |
| Operations Insight Analytics - KPIs (using aggregated time series data) | 0 | 0 | 5 | 20 | 80 |
| Operations Insight Analytics – Processed Data (using IDL) (monthly) | 0 | 0 | 20 TB | 80 TB | 320 TB |
| Operations Insight Rules | 5 | 20 | 80 | 320 | 320 |
| Operations Insight simple KPIs | 5 | 20 | 80 | 320 | 320 |
| Time Series Data Ingest Rate | 0.5 KB/s | 2 KB/s | 8 KB/s | 32 KB/s | 128 KB/s |

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| Time Series Data read/compute | 4 KB/s | 16 KB/s | 64 KB/s | 256 KB/s | 1024 KB/s |
| Time Series Data Storage | 15 GB | 60 GB | 240 GB | 960 GB | 3 840 GB |
| Visual Flow Creator Compute Hours (monthly) | 3 hours | 12 hours | 48 hours | 192 hours | 768 hours |

## Optional MindSphere Cloud Resources Packages - Overview

The resources included in the optional MindSphere Cloud Resources Packages in the table below have limits which apply for the entire Subscription Term, unless expressly indicated as 'monthly' limit.

| **Integrated Data Lake (IDL)** | **S** | **M** | **L** |
|---|---|---|---|
| Maximum volume of read data (monthly) | 10 GB | 40 GB | 160 GB |
| Maximum volume of write data (monthly) | 10 GB | 40 GB | 160 GB |
| Maximum number of read operations (monthly) | 100 000 | 400 000 | 1 600 000 |
| Maximum number of write operations (monthly) | 100 000 | 400 000 | 1 600 000 |
| Maximum number of search operations (monthly) | 10 000 | 40 000 | 160 000 |
| Total number of objects stored | 250 000 | 1 000 000 | 4 000 000 |
| Maximum data storage | 100 GB | 400 GB | 1 600 GB |
| **Semantic Data Interconnect (SDI)** | **S** | **M** | **L** |
| SDI Data Registries | 4 | 4 | 4 |
| SDI Outbound Traffic (monthly) | 10 GB | 40 GB | 1 60GB |
| SDI Query Executions (monthly) | 500 | 2 000 | 8 000 |

## Description of MindSphere Cloud Resources

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| Analytics API Calls | Analytics API calls represent the sum of all API calls which can be triggered from Anomaly Detection, Event Analytics, KPI Calculation, Signal Calculation, Signal Spectrum Analysis, Signal Validation and Trend Prediction. |
| Event | An event documents the occurrence of a defined situation (e.g. exceed temperature threshold or starting a motor). |
| Event Types | The order and the content of an event instance are specified in the corresponding event type (e.g. timestamp, priority and description). |
| File Storage | File storage represents the total volume of files that can be uploaded and stored on the Platform for an Account. File Storage is used to read, write, delete, upload |

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| | and update files associated to assets, store metadata information, and search for files by metadata. |
| Forecast Executions | The number of forecasts executed to generate prediction results on target variable via machine learning technologies in AI for Everyone. |
| Anomaly Detection Executions | The number of detections executed to generate anomaly spots on target variable via machine learning technologies in AI for Everyone. |
| Notifications | The number of notifications determines how many notifications you are allowed to trigger each month. Different limits apply for SMS, emails and mobile push notifications. |
| Operations Insight Analytics - KPIs (using aggregated time series data) | Refers to "Configure advanced KPI" capability in Operations Insight and represents number of concurrent active advanced KPIs that use aggregated time series data. |
| Operations Insight Analytics -Processed Data (Using IDL) | Represents the total data queried from IDL in a month for advanced KPIs and dashboards within Operations Insight. |
| Operations Insight Rules | Rules refer to the rules functionality in Operations Insight to create and configure rules that monitor parameters of an Asset. You can define rules that monitor the data points of the respective Assets and define resulting actions such as sending notifications and setting an event after exceeding the thresholds. |
| Operations Insight simple KPIs | Refers to "Configure simple KPI" capability in Operations Insight and represents number of concurrent active simple KPIs that use time series data. |
| SDI Data Registries | SDI Data Registry is used to organize information about the incoming data and its source. Creating a data registry is an essential step before data ingestion. |
| SDI Outbound Traffic | SDI Outbound Traffic is the total data output generated by SDI in the form of query responses. |
| SDI Query Executions | SDI Query Executions is the total of number of times SDI queries have been executed over ingested data. |
| Time Series Data Ingest Rate | Time series data ingest rate represents the rate at which the sensor data is ingested into the Platform. Data ingest is based on number of Assets, number of variables per Asset, size per variable including overhead, read cycle intervals and sending frequency. This depends on the size of the requests containing time series data sent from you to the Platform. |
| Time Series Data Storage | Time series data storage represents the total volume of time series data ingested and stored in the Platform for an Account. |
| Time Series Data read/compute | Time series data read/compute represents the rate at which time series raw and/or aggregate data is queried from the time series data storage. This depends on the size of the query response containing time series data sent from the time series data storage to the User.<br><br>Time Series Data read/compute consists of 2 types of APIs. The limits shown in the table above as well as technical limitations will take into consideration synchronous as well as asynchronous APIs.<br>Synchronous APIs are used by you to query time series data from the time series data storage. Asynchronous APIs are used by internal MindSphere services to transfer time series data within the Platform, e.g. from the time series data storage to IDL or Operations Insight Analytics. |

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| Visual Flow Creator Compute Hours | Compute hours represent the execution time for workflows created in Visual Flow Creator. |

## Security Information

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| 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. |

## Definitions

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| 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. |