DataHub - SignalGroups - generalDescription

General

Each signal group represents an amount of information, necessary to provide an defined service to the customer.

Hence, they are called "service" from the DataHub's point of view.

The signal

Data Point	Description	Data Type	Data Point Type	Availability SIEMENS	Availability Heidenhain	Availability FANUC	Availability MAPPS
systems.machineDataConnector.machineConnectionEstablished	information about the connection status of the machine	boolean	event	YES	YES	YES	YES

is send if one of the signal groups is activated as an event.

Send condition

The behavior when the data of a signal group are send changed here

~~SWSMDC-1878~~ - Change enabling behavior of the DataHub signal groups DONE

So the data will be send if the service/signal group is set to active in the device twin property

Condition	Customer Controlled	Description
~~Enabled on the machine & requested by the DataHub~~	~~yes~~	~~The service/signal group can be enabled / disabled at the machine (CCM for MDC v2).~~

~~If the service/signal group is enabled on the machine, the DataHub interface will set the enabled flag of the related service to true in the reported device twin property.~~

~~As soon as the enabled flag is set to true in the desired device twin enabled property, the data are exchanged/send with/to the DataHub~~

Reaction to changes

- Changes on the desired device twin property should be evaluated at runtime (a restart of the interface must not be necessary). ~~Changes in the configuration (e.g. in the CCM) might be applied after a restart of the interface/MDC.~~

Temporary signals at MDCv2

During implementation and integration, we need ways to try out new signals being sent to the data hub. For his is ahead of the planned implementations in the MDCv2. All these are disabled by default and can be enabled only manually in test by setting the environment variable IOT_HUB_SEND_OTHER_DATA_ENABLE = 1 (has to be exactly 1).

Device Twin Properties

Each signal service uses it's own set of reported/desired device twin properties. The only uniform property is the *enabled* property. The other properties are defined separat for each service.

Enabled property

enabled	reported	desired
true	service is reported as enabled by the MDC	service is ~~requested from~~ enabled by the DataHub
false	service is reported as disabled by the MDC	service is disabled by the DataHub

Possible combinations

Enabled, reported	Enabled, desired	Behavior
false	false	Service is not available and not activated => No data are send/exchanged for this service
true	false	 => should not happen, invalid state
false	true	Service is enabled by the DataHub, but not yet enabled on the MDC => no data are send/exchanged for this service
true	true	Service is enabled by the DataHub and reported as enabled by the MDC => related data are send/eschanged
false	missing	Service is not enabled by the DataHub => No data are send/exchanged for this service
true	missing	=> should not happen, invalid state

Example

> *"services": {*
>
> *"<serviceName_1>": { "enabled": true, "<parameter_1>": "<value_1>", "<parameter_2>": "<value_2>", "<parameter_3>": "<value_3>", "<parameter_n>": "<value_n>" },*
>
> *"<serviceName_2>": { "enabled": true, "<parameter_1>": "<value_1>", "<parameter_2>": "<value_2>", "<parameter_3>": "<value_3>", "<parameter_n>": "<value_n>" },*
>
> *....*
>
> *"<serviceName_N>": { "enabled": true, "<parameter_1>": "<value_1>", "<parameter_2>": "<value_2>", "<parameter_3>": "<value_3>", "<parameter_n>": "<value_n>" }*
>
> *}*