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# Introduction

This contribution proposes to add a new section for Modbus Interworking Use Case.

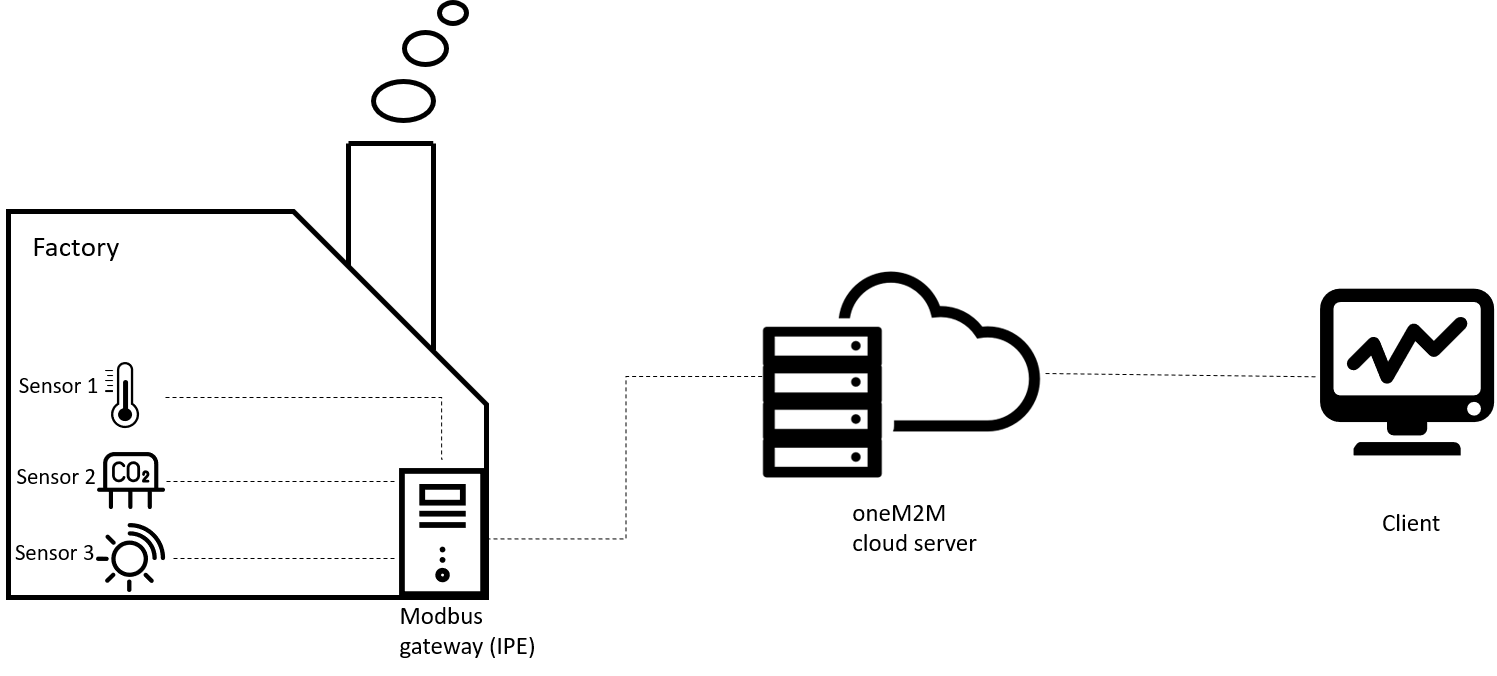
### -----------------------Start of change 1-------------------------------------------

# 6 Scenarios for oneM2M and Modbus Interworking

*This clause studies the* *scenarios for oneM2M and Modbus Interworking, such as Modbus-based device can connect to IN directly or via MN/ASN, and Modbus-based devices can connect to each other via IN/MN/ASN.*

## 6.1 Use case

As the Modbus protocol is mainly used for industial purposes, a use case where a group of sensors working over Modbus are remotely monitored by client application will be described. The figure 6.1-1 below shows a possible use case of interworking between Modbus devices and oneM2M services. A factory has 3 sensors working on Modbus protocol which are connected to a local Modbus gateway (IPE) with an embedded application to send sensors data to oneM2M cloud server. The client can monitor sensors readings by accessing oneM2M cloud server.



**Figure 6.1-1 Use case architecture overview.**

Figure 6.1-2 shows how the architecture presented in previous section can be presented in the form of Modbus and oneM2M entites. Sensors 1, 2, 3 from Figure 6.1-1 are represented as Modbus Slaves and are connected to Modbus Master. Modbus Master is integrated with oneM2M AE entity to use services provided by IN-CSE. Modbus Master coupled with oneM2M AE entity make up IPE. It is a key unit to provide interworking between Modbus devices and oneM2M based platform. Client application is represented as an AE.

AE

Modbus

Master

IPE

IN-CSE

Mca

Slave 1

Slave 2

Slave 3

Mca

AE

**Figure 6.1-2 Use case entity representation**

### -----------------------End of change 1 -------------------------------------------