EcoStruxure Building Operation

Enlighted Energy Manager SmartConnector

Installation & User Guide

October 2022

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1 Functional Overview

The Enlighted EM interface is a middleware application that enables communication between Enlighted Energy Manager API service with EcoStruxure Building Operation via EcoStruxure Web Services (EWS). The interface communicates with the Enlighted Energy Manager API to get the information about the Company, Campus, floors, and areas the user has access, and the fixtures present in the floors and stores it in the EcoStruxure Web Services (EWS).

The processor leverages the SmartConnector Service framework and details of the application (release history, installation notes etc.) are available separately and are not covered in this manual.

The SmartConnector application is licensed on a single server basis but may also be configured to connect to both Automation Server (AS-P) devices as well as Enterprise Servers (ES).

2 Restrictions & Limitations

2.1 SmartConnector Service Version

The processors have been configured to operate with the SmartConnector version 2.4.40, use with any other version of the SmartConnector framework is not supported.

2.2 EWS Supported Systems

The processors can support EcoStruxure systems operating with the EcoStruxure Web Services (EWS) protocol v1.1 and v1.2.

2.3 Enlighted EM Supported System

The SmartConnector has been tested and validated against the Enlighted Energy Manager API.

Other versions may cause issues and are not supported. Please check with your supplier.

3 Installation

Please refer to the SmartConnector Installation and Configuration Guide.pdf for guidance on SmartConnector installation.

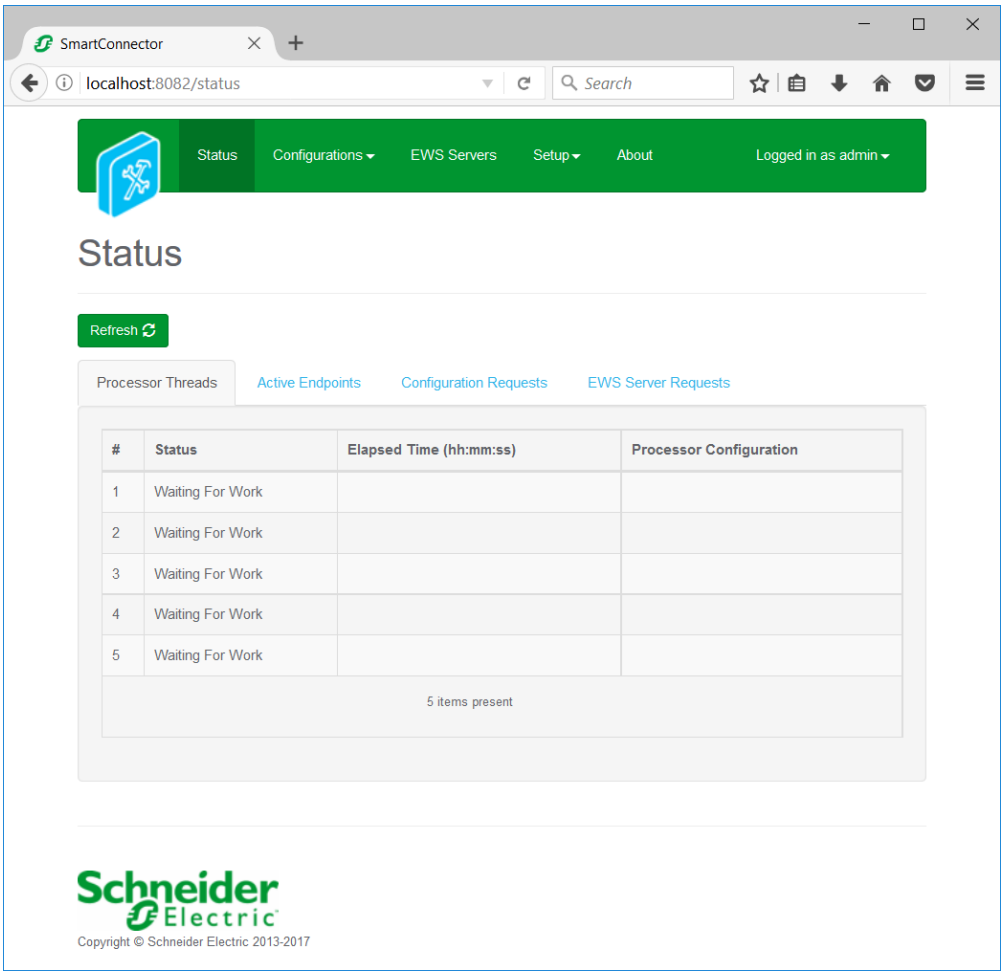
To deploy the Enlighted EM SmartConnector assembly, copy the files "**ISC.SmartConnector.EnlightedEMExtension.dll**", "**SmartConnector.Utilities.dll**" and "**ISC.EnlightedEM.API.Wrapper.dll**" into the service installation directory. Normally "C:\Program Files (x86)\Schneider Electric\SmartConnector"

4 Configuration & Settings

4.1 Processor Configuration

With a default installation of SmartConnector, the configuration pages for the server can be reached at the following address on the server the service has been installed on:

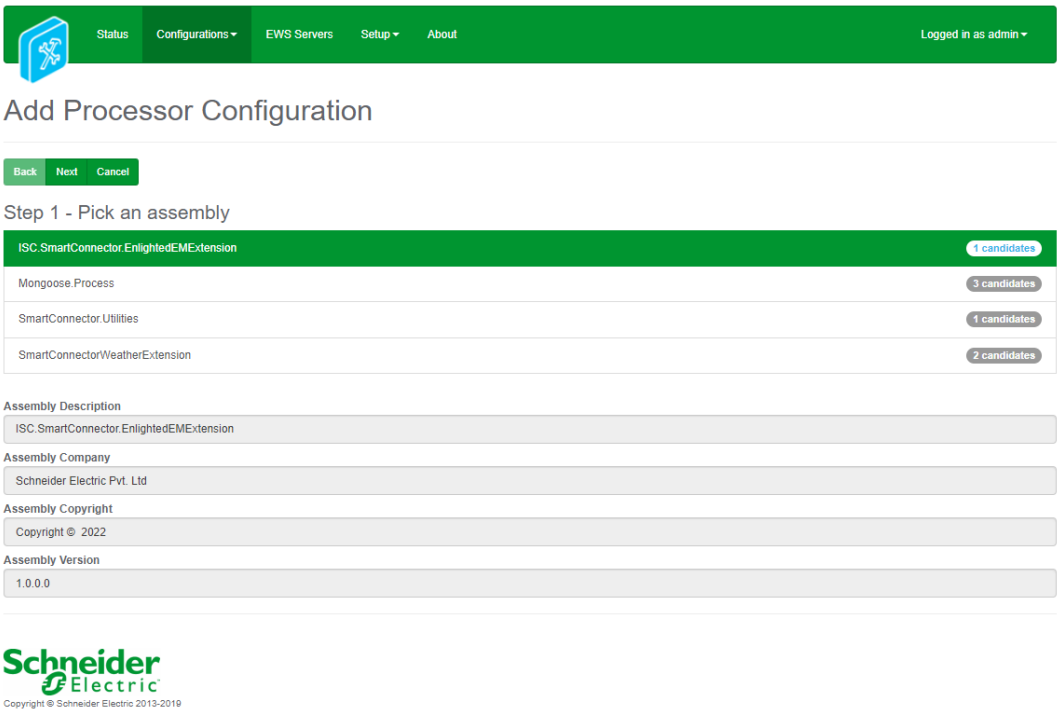
http://localhost:8082/



4.2 Adding the Custom Assembly to the Service

Switch to the Configurations tab and select Processor and click on Add New +

At the Add Configuration window, Step 1 – Pick an assembly, select the reference to “**ISC.SmartConnector.EnlightedEMExtension**” (this will be highlighted green when selected)



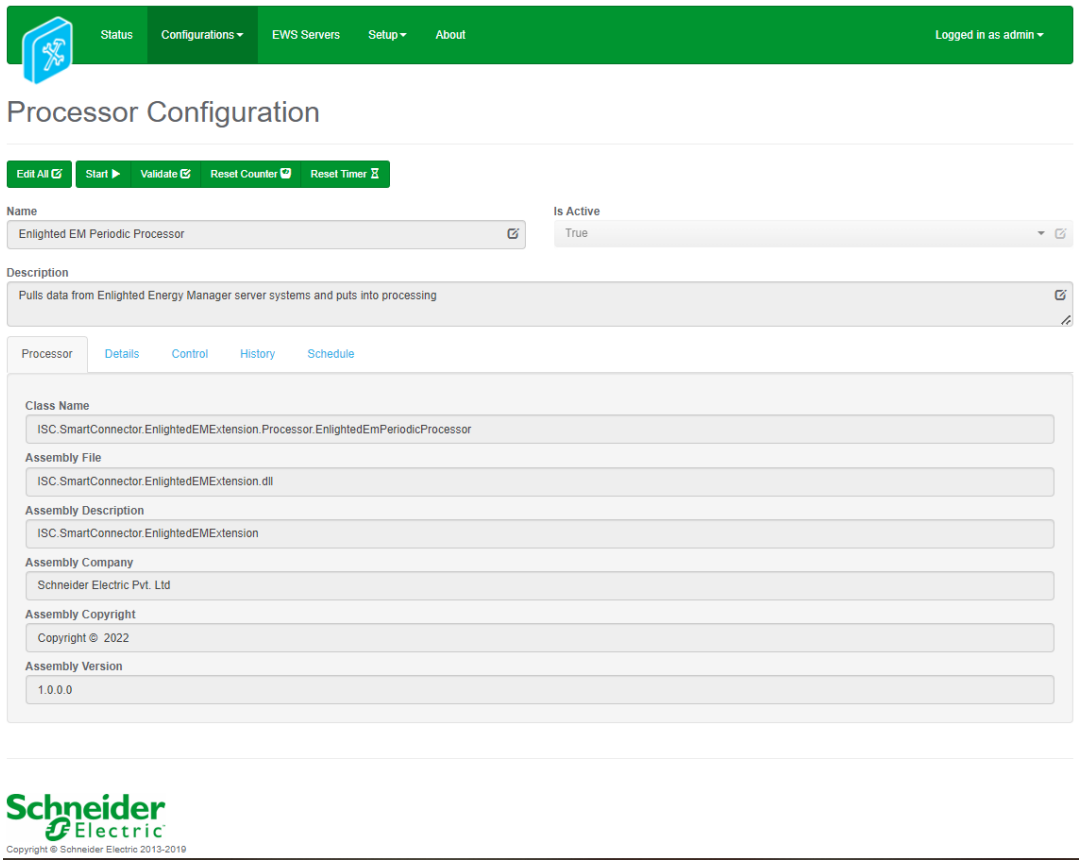
Select Next and proceed to Step 2 Choose a Class

Ensure the class “**ISC.SmartConnector.EnlightedEMExtension.Processor.EnlightedEmPeriodicProcessor**” is selected first

Select Next and proceed to Step 3 Name Configuration

Enter a meaningful name and description for the Processor which will enable you to identify this process in the configuration window later.

Select Finish and proceed to the Configuration screen.



In the configuration window select the Details Tab, you will then be presented with the screen to enter the configuration information. Much of the configuration has default options however they should be checked and validated for the installation. Edit the applicable fields as follows.

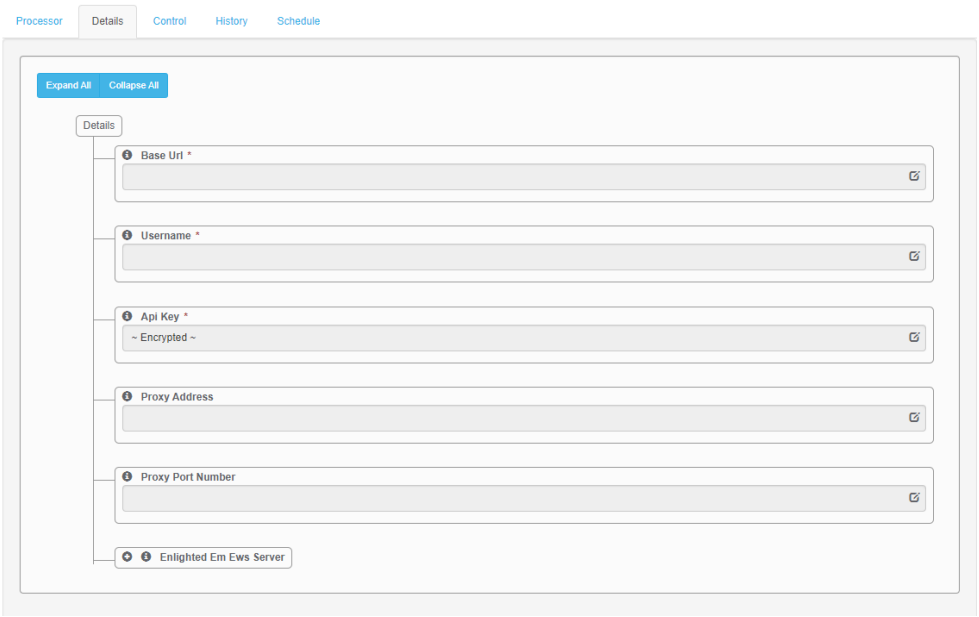
Base Url
The Base URL to connect to the Enlighted EM. By Default, it is https://<YOUR_TENANT>.emc.enlightedinc.com.

Username
Username needed to access the Enlighted EM.

Api Key
Api Key needed to access the Enlighted EM.

Proxy Address
Proxy Address that is used by the server/machine.

Proxy Port Number
Proxy Port Number that is used by the server/machine.



Expand Enlighted EM Ews Server Configuration field

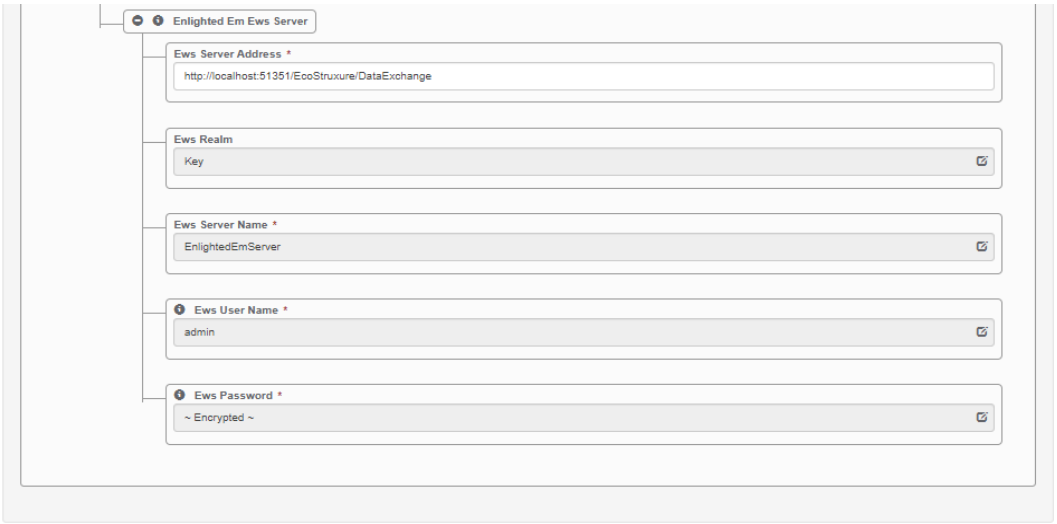
Ews Server Address
This property should be set to the full address required to access the EWS Server being hosted. This is normally in the case of a StruxureWare ES or AS device as follows:
http://<IPADDRESS>:<PORT(8093)>/EcoStruxure/DataExchange
***Note that the address is case sensitive!**

Ews Realm
Realm for the EWS Server.

Ews Server Name
This property is just a friendly text name field to allow you to easily identify the specific Endpoint you are configuring.

Ews Username
This property is required to allow the EWS server connection to be authenticated.

Ews Password
As above, this is the password related to the user credentials.



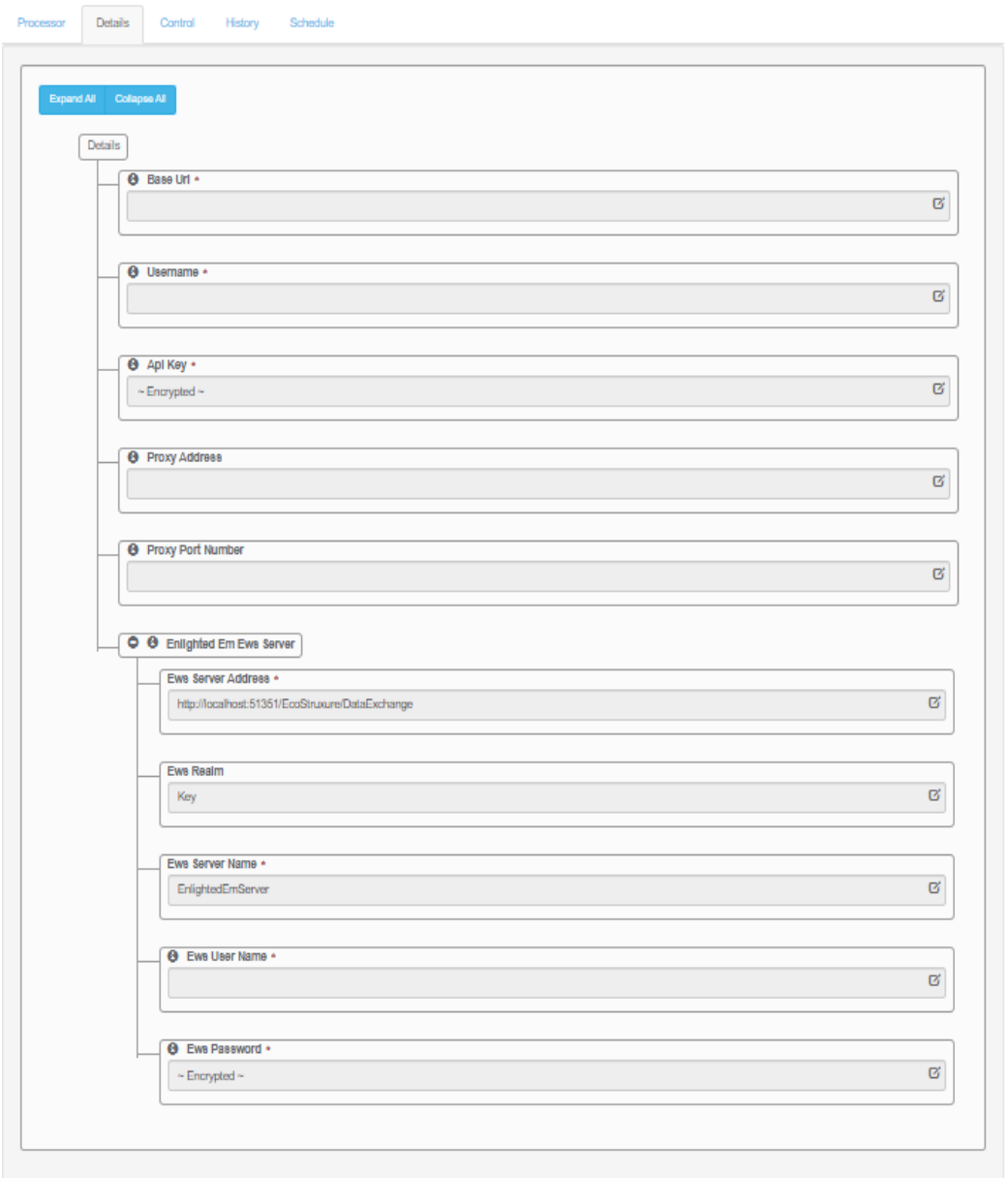
In the configuration window select the Control Tab, you will then be presented with several options to define the Processor's default behavior. It is recommended to set the following:

Runs On Start – Yes (To enable the Processor to automatically start with the machine)
Runs On Schedule – Yes (Define a schedule that determines how often the server is updated with messages received from the PMS)

Manually Startable – Yes (To allow a user to start through the configuration window
Manually Stoppable - Yes

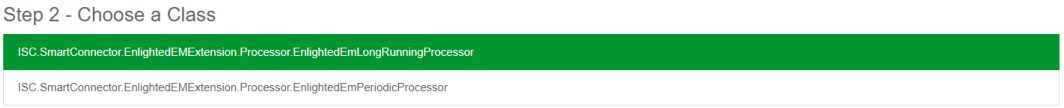
The Save Button allows the process configuration to be saved to the database.

A complete configuration will appear as follows:


Processor
Details
Control
History
Schedule
Expand All
Collapse All
Details
Base Url *
Username *
Api Key *
~ Encrypted ~
Proxy Address
Proxy Port Number
Enlighted Em Ews Server
Ews Server Address *
http://localhost:51351/EcoStruxure/DataExchange
Ews Realm
Key
Ews Server Name *
EnlightedEmServer
Ews User Name *
Ews Password *
~ Encrypted ~

After adding the first Processor, navigate back to Processor screen, click on ‘Add New’ and Select “**ISC.SmartConnector.EnlightedEMExtension**” (this will be highlighted green when selected)

Click on Next and select the processor “**ISC.SmartConnector.EnlightedEMExtension.Processor.EnlightedEmLongRunningProcessor**”. This is a long running processor, so we need to set the schedule interval.

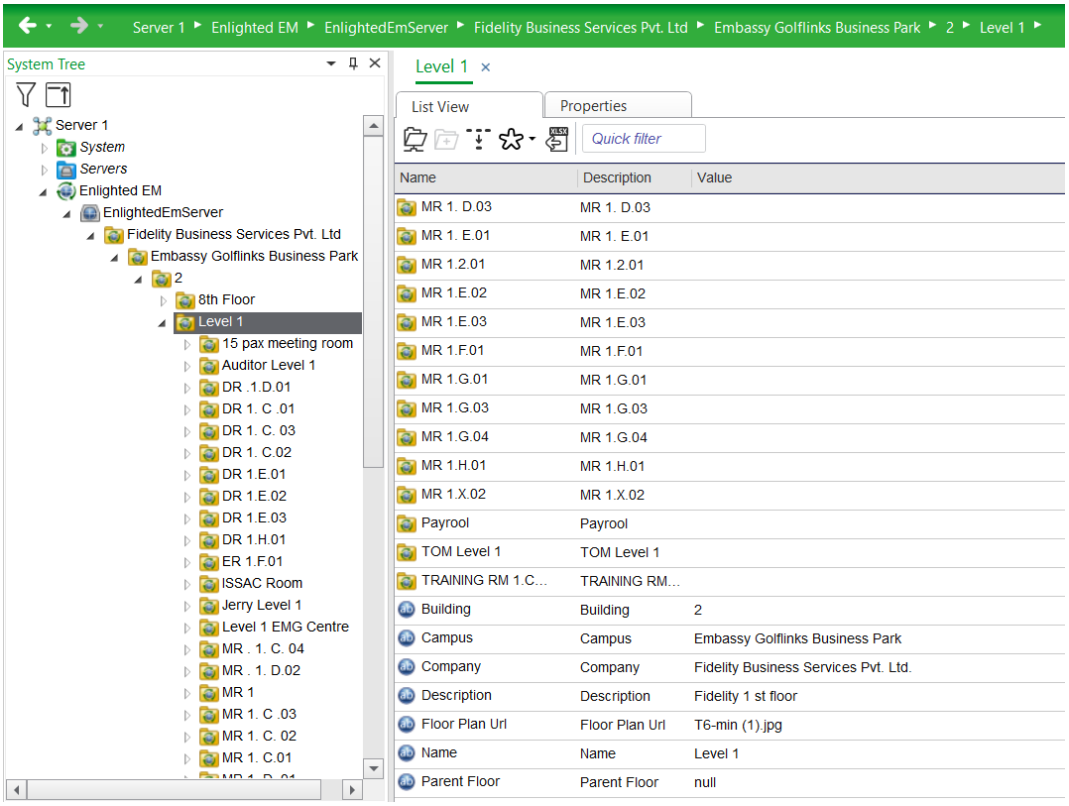


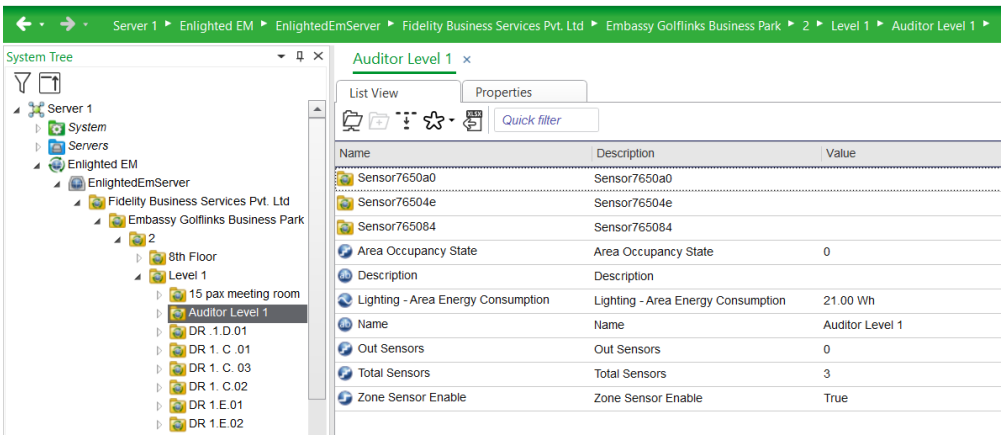
Click on Next and select Finish. Please provide the same configuration details and EWS server details, that has been provided to the processor - “**ISC.SmartConnector.EnlightedEMExtension.Processor.EnlightedEmPeriodicProcessor**”.

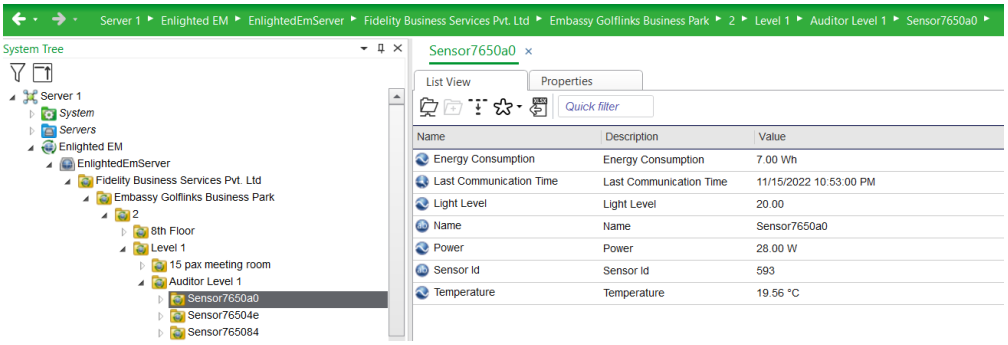
After Adding both the processors, first step is to run the periodic processor – “**ISC.SmartConnector.EnlightedEMExtension.Processor.EnlightedEmPeriodicProcessor**” only.

After this processor is executed once, we can execute the processor – “**ISC.SmartConnector.EnlightedEMExtension.Processor.EnlightedEmLongRunningProcessor**”, this is long running processor and will update the Area Occupancy state, Light Levels and Last communication time every 5 mins.

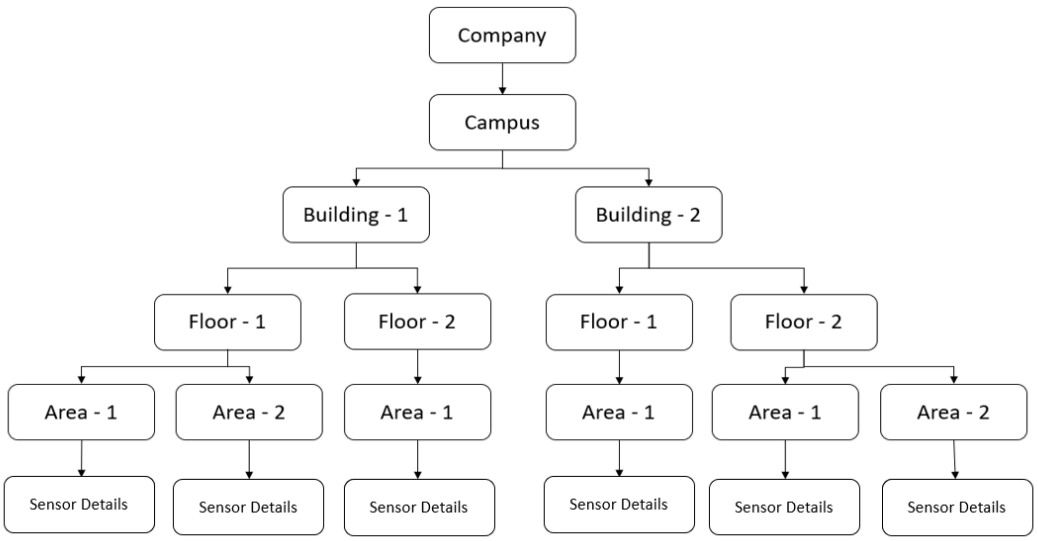
Once the Smart Connector EWS Server Interface has been hosted in EcoStruxure Building Operation, the sensor details grouped by area under floors will be displayed as follows:


Server 1 ▸ Enlighted EM ▸ EnlightedEmServer ▸ Fidelity Business Services Pvt. Ltd ▸ Embassy Golflinks Business Park ▸ 2 ▸ Level 1 ▸
System Tree
Server 1
System
Servers
Enlighted EM
EnlightedEmServer
Fidelity Business Services Pvt. Ltd
Embassy Golflinks Business Park
2
8th Floor
Level 1
15 pax meeting room
Auditor Level 1
DR .1.D.01
DR 1. C .01
DR 1. C. 03
DR 1. C.02
DR 1.E.01
DR 1.E.02
DR 1.E.03
DR 1.H.01
ER 1.F.01
ISSAC Room
Jerry Level 1
Level 1 EMG Centre
MR . 1. C. 04
MR . 1. D.02
MR 1
MR 1. C .03
MR 1. C. 02
MR 1. C.01
Level 1
List View
Properties
Quick filter
Name
Description
Value
MR 1. D.03
MR 1. E.01
MR 1.2.01
MR 1.E.02
MR 1.E.03
MR 1.F.01
MR 1.G.01
MR 1.G.03
MR 1.G.04
MR 1.H.01
MR 1.X.02
Payrool
TOM Level 1
TRAINING RM 1.C...
Building
Campus
Company
Description
Floor Plan Url
Name
Parent Floor
2
Embassy Golflinks Business Park
Fidelity Business Services Pvt. Ltd.
Fidelity 1 st floor
T6-min (1).jpg
Level 1
null


Server 1 ▸ Enlighted EM ▸ EnlightedEmServer ▸ Fidelity Business Services Pvt. Ltd ▸ Embassy Golflinks Business Park ▸ 2 ▸ Level 1 ▸ Auditor Level 1 ▸
System Tree
Server 1
System
Servers
Enlighted EM
EnlightedEmServer
Fidelity Business Services Pvt. Ltd
Embassy Golflinks Business Park
2
8th Floor
Level 1
15 pax meeting room
Auditor Level 1
DR .1.D.01
DR 1. C .01
DR 1. C. 03
DR 1. C.02
DR 1.E.01
DR 1.E.02
Auditor Level 1
List View
Properties
Quick filter
Name
Description
Value
Sensor7650a0
Sensor76504e
Sensor765084
Area Occupancy State
Description
Lighting - Area Energy Consumption
Name
Out Sensors
Total Sensors
Zone Sensor Enable
Lighting - Area Energy Consumption
21.00 Wh
Auditor Level 1
0
3
True



The organization of Enlighted EM data hierarchy that is stored in EWS is shown in below diagram.



5 Revision History

Version	Assembly File Details	Date
1.0.0.11	ISC.SmartConnector.EnlightedEMExtension.dll	19th October 2022

Assembly files required:

ISC.SmartConnector.EnlightedEMExtension.dll
ISC.EnlightedEM.API.Wrapper.dll
SmartConnector.Utilities.dll

6 References

SmartConnector Installation and Configuration Guide.pdf
(TDS-M-INSTALLCONFIG-US.BU.N.EN.12.2017.2.30.CC)

SmartConnector Version 2.2 Release Notes.pdf
(TDS-M-RELEASENOTES-US.BU.N.EN.12.2017.2.30.CC)

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