

# EcoStruxure Building Operation

## OpenWeather Integration SmartConnector

### Installation & User Guide

November 2020



**Prepared By:**

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# 1 Functional Overview

The OpenWeather extension is a middleware application that sits inside SmartConnector and establishes a link between the OpenWeather API. The required weather locations are passed to the SmartConnector Extension via the SmartConnector portal configuration.

The SmartConnector then serves out EWS points to represent these geo-graphical areas. There is a folder for current weather, a folder for 5 days forecast on a 3-hourly basis, and the option for a 16-day forecast daily, but the 16-day requires a paid-for subscription to the OpenWeather API.

Key Features:

The main Features are:

- Current Weather Geo-graphically
- 5-day Forecast Weather Geo-Graphically
- 16-day Forecast Weather Geo-Graphically

## 2 Restrictions & Limitations

### 2.1 SmartConnector Service Version

The processors have been configured to operate with the SmartConnector version 2.4, 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.

## 3 Installation

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

To deploy the OpenWeather extension copy the contents of the latest OpenWeatherV2.0.0.\*.zip into the service installation directory which is normally "C:\Program Files (x86)\Schneider Electric\SmartConnector". The latest version OpenWeatherV2.0.0.\*.zip contains 2 files. Ensure OpenWeather.extension.dll exists and all files are "unblocked" (see properties of file).

# 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/>

The screenshot shows the SmartConnector web interface. The browser address bar displays `localhost:8082/status`. The navigation menu includes: Status, Configurations, EWS Servers, Setup, About, and Logged in as admin. The main content area is titled "Status" and features a "Refresh" button. Below the title, there are tabs for "Processor Threads", "Active Endpoints", "Configuration Requests", and "EWS Server Requests". The "Processor Threads" tab is active, showing a table with the following data:

#	Status	Elapsed Time (hh:mm:ss)	Processor Configuration
1	Waiting For Work		
2	Waiting For Work		
3	Waiting For Work		
4	Waiting For Work		
5	Waiting For Work		

Below the table, it indicates "5 items present". The footer contains the Schneider Electric logo and the text "Copyright © Schneider Electric 2013-2017".

## 4.2 Adding the Custom Assembly to the Service

Switch to the Configurations tab and select Add New +

Add New +

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

The screenshot shows the 'Add Processor Configuration' window. The top navigation bar is green with a blue wrench icon on the left and 'Status', 'Configurations', 'EWS Servers', 'Setup', and 'About' tabs. The user is logged in as 'admin'. The main title is 'Add Processor Configuration'. Below the title are 'Back', 'Next', and 'Cancel' buttons. The current step is 'Step 1 - Pick an assembly'. A list of assemblies is shown with their candidate counts:

Assembly Name	Candidates
ContinuumAlarms.Extension	1 candidates
<b>ISC.OpenWeatherConnector</b>	<b>1 candidates</b>
Mongoose.Process	3 candidates
SecurityExpertExtension	2 candidates

Below the list are input fields for 'Assembly Description', 'Assembly Company', 'Assembly Copyright' (pre-filled with 'Copyright © 2018'), and 'Assembly Version' (pre-filled with '2.0.0.0'). The Schneider Electric logo and copyright notice are at the bottom.

Select Next and proceed to Step 2 Choose a Class

Ensure the class ISC.OpenWeatherConnector.WeatherProcessor is selected first

The screenshot shows the 'Add Processor Configuration' window at Step 2: 'Choose a Class'. The top navigation bar is the same as in Step 1. The main title is 'Add Processor Configuration'. Below the title are 'Back', 'Next', and 'Cancel' buttons. The current step is 'Step 2 - Choose a Class'. A single class is selected and highlighted in green:

<b>ISC.OpenWeatherConnector.WeatherProcessor</b>
--

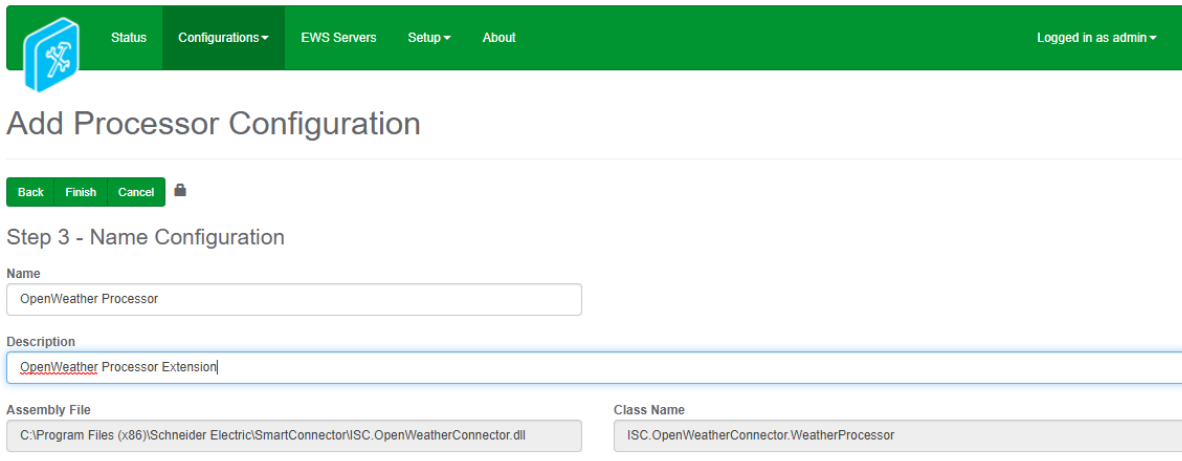
The Schneider Electric logo and copyright notice are at the bottom.



Select Next and proceed to Step 3 Name Configuration

Enter a 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.



Back Finish Cancel

### Step 3 - Name Configuration

Name  
OpenWeather Processor

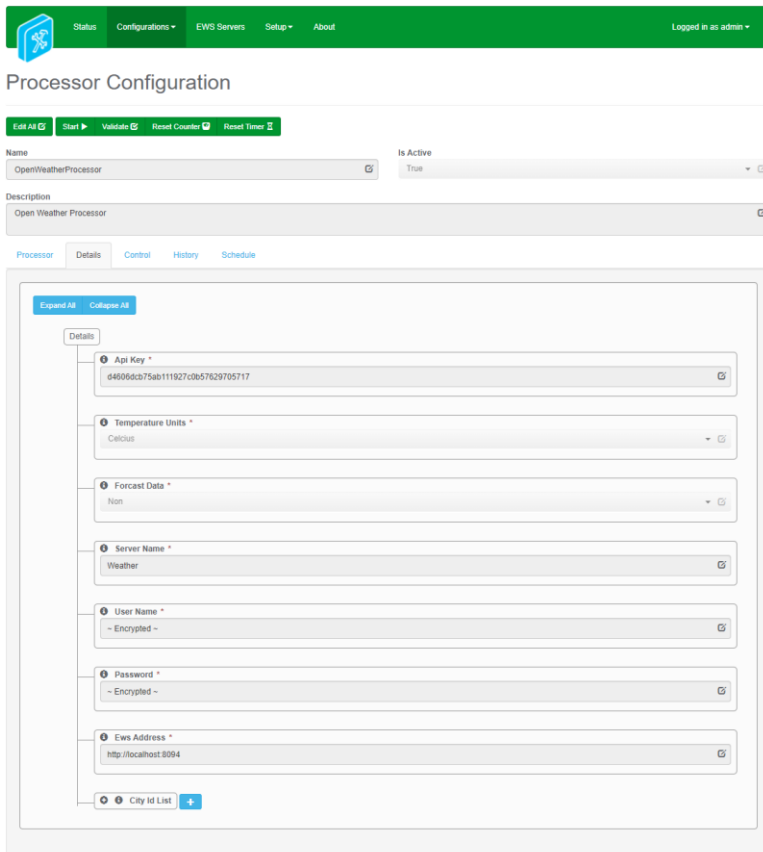
Description  
OpenWeather Processor Extension

Assembly File  
C:\Program Files (x86)\Schneider Electric\SmartConnector\ISC.OpenWeatherConnector.dll

Class Name  
ISC.OpenWeatherConnector.WeatherProcessor

Select Finish and you will proceed to the Configuration screen.

SmartConnector will display information about configuration settings that need to be provided for the processor to function. Select the Details Tab below, 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. Information about the applicable fields are as follows.



### Api Key

This is key used to access the open weather service. The default key may work for you. If not then go to <https://www.openweathermap.org/api> and signup for an account. Please check the subscription terms. For example the 16 day forecast you will require a subscription account rather than the free one for a basic current weather update.

### Temperature Units

This is a drop-down option and gives a choice between kelvin, Fahrenheit and Celsius. When points are served out of EWS this will be the unit and value used.

### Forecast Data

This is a drop-down option and gives a choice between adding a 5day forecast or a 16day forecast or both. Please note for a 16day forecast you require a paid subscription.

### Server Name

This is the name given to the EWS endpoint server. This can be left as Weather.

**Username**

This is the username to be used to access the EWS interface that will be served out for EBO.

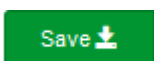
**Password**

This is the password to be used to access the EWS interface that will be served out for EBO.

**Ews Address**

This is the hosting address created for the EWS interface the default address should be fine.

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



The OpenWeather Processor is a single run processor. The processor should be scheduled to update the values. The schedule should be set to run the OpenWeather processor at the required interval to update the weather forecast values.

## 5 Revision History

Version	Assembly File Details	Date
2.0.0.0	OpenWeatherV2.0.0.0.zip	30th Nov 2020

**Assembly files required:**

ISC.OpenWeatherConnector.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)