

BA Asset Health Extension Installation and Configuration Guide Digital Buildings



Contents

1. Support	
2. Revision History	
3. Introduction	4
3.1 Architecture	4
4. Versions & Prerequisites	5
4.1 SmartConnector Framework Version	5
4.2 EcoStruxure Building Operation Version	5
4.3 Prerequisites	5
4.4 Licensing	5
4.5 Networking Prerequisites	
4.6 Quick Start Installation Sequence	
5. SmartConnector Framework Installation	7
5.1 Download the SmartConnector Framework	7
5.2 Install the SmartConnector Framework	
5.2.1 Install SmartConnector Framework	
5.2.2 Validate SmartConnector Framework	10
5.2.3 Change Default Credentials	11
5.2.4 Install SmartConnector Framework Runtime License	
6. BA Asset Health SmartConnector Extension Installation	15
6.1 Request API credentials	15
6.2 Downloading the BA Asset Health Extension	15
6.3 Installing the BA Asset Health Extension	
6.4 Licensing the BA Asset Health Extension	16
6.5 Configure BA Asset Health SmartConnector SetupProcesso	ır17
6.6 Configure and run BA Asset Health SmartConnector Diagno	sticsProcessor20
7 BA Asset Health Extension with EcoStruxure Building Operation	
7.1 Connect EWS Server with EcoStruxure Building Operation	
7.2 Host EWS objects in EcoStruxure Building Operation	
7.3 Display data in graphics	
7.3.1 BA Asset Health Widget Graphics Pack	
7.3.2 Building Summary Widget	
7.3.3 ECM Widget	
8. Troubleshooting	
8.1 SmartConnector Log File	
8.2 Framework Licensing Error	
8.3 SQL Authentication Error	
9. Appendix A – SQL User Roles	



1. Support

Schneider Electric provides branch and channel partners with planning and implementation assistance on SmartConnector from Product Support. To request help, send an email to Product Support specifying the solution name and the type of assistance you require. Product Support will relay your request to the appropriate support team. For extension specific requests, please reach out to Integrations & Solutions Center.

Integrations & Solutions Center

BA Asset Health Extension: isc.uk@schneider-electric.com

North America (NAM) Product Support

Building Management Systems (BMS): productsupport.NAM-BMS@schneider-electric.com

Global Product Support

Building Management Systems (BMS): productsupport.BMS@schneider-electric.com

2. Revision History

Date	Author	Revision	Changes made
01/12/2022	КН	A	First draft
07/31/2023	NL	В	Link updates
04/24/2024	CI	С	Solution update

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3. Introduction

This document outlines the installation and configuration of the EcoStruxure Building Advisor Asset Health SmartConnector Extension required to integrate BA Asset Health with EcoStruxure Building Operation to gain high level insights to how your building is performing. The primary purpose of the SmartConnector Extension is to drive exposure of the Building Advisor Asset Health portal and to serve as a constant reminder to end-user how powerful the BA Asset Health data is.

This document assumes that EcoStruxure Building Operation have already been installed and are functional, and that there is an existing subscription to Building Advisor Asset Health.

3.1 Architecture

SmartConnector Framework is responsible for creating an EcoStruxure Web Services (EWS) Server that can be connected to the EcoStruxure Building Operation system.

BA Asset Health Extension is responsible for communication to the Asset Health API using RESTful WebServices over a secure connection (SSL). Each datapoint received from the Asset Health API will be represented as an EWS object. Buildings and Equipment will be represented as folders, and key KPI's will be represented as Analog Values.



4. Versions & Prerequisites

4.1 SmartConnector Framework Version

The processors have been configured to operate with the SmartConnector version 2.5, use with any other version of the SmartConnector framework is not supported.

4.2 EcoStruxure Building Operation Version

The processors have been configured to operate with the EcoStruxure Building Operation 3.2 or later, use with any other version of the EcoStruxure Building Operation system is not supported.

4.3 Prerequisites

In order to install the BA Asset Health SmartConnector Extension, we must first install and license the SmartConnector Framework. There are multiple configuration options as to where the SmartConnector Framework can be installed – for use in this document; the SmartConnector Framework and Extension will be installed on the same machine as the EcoStruxure Enterprise Server and SQL Express. For additional options using SQL or remote servers not containing the Enterprise Server refer to the SmartConnector Installation and Configuration Guide found in the <u>SmartConnector Server Portal</u>.

The following prerequisites must be performed before you start the installation and configuration of the SmartConnector Framework and BA Asset Health SmartConnector Extension.

- EcoStruxure Building Operation
 - o Installed
 - o Configured
 - Functional
 - o Version 3.2 or later
 - Valid license
- Microsoft .NET Framework v4.5 or later on the machine where SmartConnector is located
- SQL Express installed on same machine or another with network access to the SmartConnector server

Note: If SQL Express is installed on a remote machine follow the detailed instructions in the *SmartConnector Installation and Configuration Guide*

• The specified user must have at least the public and dbcreator user roles in the SQL server

Note: Additional Installation options for installing the SmartConnector Framework can be located in the *SmartConnector Installation and Configuration Guide*.

4.4 Licensing

The BA Asset Health SmartConnector extension does not have a license cost, but you need to request an FOC license by emailing <u>isc.uk@schneider-electric.com</u> with request for a claim token to **ISC.EcoStruxureBuildingAdvisorDiagnostics**. To deploy the SmartConnector solution, a SmartConnector deployment license is also required.

Use this part number to place orders for the SmartConnector Deployment license:

Part Number	Product Name	Description
SXWSWSCDL100001	SW-SMART-CONNECT	SmartConnector Deployment License
Document	Revision	Revision date Page



4.5 Networking Prerequisites

Ensure the communication channels are working using the following rules:

Source		Destination		Brotocol	Action
IP	Port	IP	Port	FIOLOCOI	ACTION
SmartConnector Server	80/443	EcoStruxure Building Operation Server	80/443	TCP	Accept
SmartConnector Server	443	https://rest.buildingsapi.net	443	TCP	Accept

4.6 Quick Start Installation Sequence

The following overview provides the steps necessary to install and configure the system. The subsequent chapters will provide detailed information for each step in the process.

- 1. Install, configure & license SmartConnector Framework
- 2. <u>Request API credentials</u>
- 3. Install and configure BA Asset Health SmartConnector Extension
- 4. Configure and run SetupProcessor
- 5. <u>Configure and schedule DiagnosticsProcessor</u>
- 6. Host objects in EcoStruxure Building Operation
- 7. <u>Deploy graphics package</u>



5. SmartConnector Framework Installation

The first step in the process is to download SmartConnector Framework software from <u>SmartConnector</u> <u>Server</u>, once downloaded you will install the SmartConnector Framework software, obtain the machine thumbprint, license the Framework to the machine thumbprint and finally configure the Framework system. Once the SmartConnector Framework has been installed, configured, and licensed we can extend the Framework by adding the BA Asset Health SmartConnector Extension.

5.1 Download the SmartConnector Framework

The following steps will assist in downloading the SmartConnector Server Framework

- 1. Go to SmartConnector Server
- 2. Request credentials to logon to the web site
- 3. Log on to the website
- 4. From the menu, select Download Center



7. Select the latest version of SmartConnector (at time of writing it is v2.5.5.93)

Note: Make sure Popups are not blocked by your browser



- 8. Save the SmartConnector v2.5.5.93exe download file
- 9. Select the SmartConnector Installation and Configuration Guide.pdf
- 10. Save the SmartConnector Installation and Configuration Guide.pdf download file



5.2 Install the SmartConnector Framework

To install the SmartConnector Framework, execute the setup file that was just downloaded. Run SmartConnector-v2.5.5.93.exe – You must run this as an Administrator.

5.2.1 Install SmartConnector Framework

- 1. Locate the downloaded file SmartConnector-v2.5.5.93.exe
- 2. Right click on the file SmartConnector-v2.5.5.93.exe
- 3. Select Run as Administrator

2	Welcome to the InstallShield Wizard for SmartConnector
H	The InstallShield(R) Wizard will install SmartConnector on your computer. To continue, click Next.
	WARNING: This program is protected by copyright law and international treaties.
No.	< Back Next > Cancel

- 4. Click Next.
- 5. Review and accept the terms to the End User License Agreement



- 6. Click Next.
- 7. Choose the Setup Type you wish to perform. If this is a new installation, **you must choose Complete**.
- 8. Click Next.



9. Enter the required information for the database server where you will install the database to:

~	1		
	localhost\S	QLEXPRESS	
	Database Nam	e:	
	SmartConn	nector	
Authentication Type:			
	Windows I	mplicit	~
	(Dark	Neut 2	Canad
		SmartConr Authentication Windows I	SmartConnector Authentication Type: Windows Implicit

- a. You can **uncheck** Add sample data For this manual example we are using SQL express and a local Windows user
- b. Select the Database Server Type: SQLServer Express
- c. Select the Authentication Type: Windows Implicit

Note: The logged in user must have at least the public and dbcreator user roles in the local SQL server. In this configuration SmartConnector runs under the NT Authority\System account. **See** <u>Appendix A</u>

For additional SQL installation options, refer to the *SmartConnector Installation and Configuration Guide* previously downloaded

d. Click **Next** to display the final confirmation dialog shown below.

😥 SmartConnector - InstallShield W	izard		×
Ready to Install the Program			4
The wizard is ready to begin installa	tion.		
Click Install to begin the installation			
If you want to review or change an exit the wizard.	y of your installatio	on settings, click Back	. Click Cancel to
InstallShield			
	< Back	Install	Cancel

- 10. Click Install to complete the installation and create the default database.
- 11. Click Finish.



5.2.2 Validate SmartConnector Framework

To review the service installation, you should perform the following:

- 1. Open the Windows Services dialog.
- 2. Find the entry for "SmartConnectorService". It should have a Status of "Started" or "Running" and a Startup Type of "Automatic" as shown below.

• 🔿 🔂 🖸 1	Q 🛃 🛛 🖬 🖌 🕨 🖬 🕪							
🍓 Services (Local)	O Services (Local)							
	SmartConnectorService	Name	Description	Statu	Startup Type	Log On As		
		🛸 Server	Supports file, print, a	Started	Automatic	Local System		
	Stop the service	端 Shell Hardware Detection	Provides notification	Started	Automatic	Local System		
	Nestary the service	🔍 Smart Card	Manages access to s		Manual	Local Service		
		端 Smart Card Removal Policy	Allows the system to		Manual	Local System		
		端 SmartConnectorService		Started	Automatic	Local System		
		🖏 SNMP Trap	Receives trap messa	Manual	Local Service			
		🛸 Software Protection	Enables the downloa		Automatic (Delayed Start)	Network Service		
		🚳 SPP Notification Service	Provides Software Li		Manual	Local Service		
		🖏 SQL Server (SQLEXPRESS)	Provides storage, pr	Started	Automatic	NT Service\MSS		
		端 SQL Server Agent (SQLEXPRESS)	Executes jobs, monit		Manual	Network Service		
		🔍 SQL Server Browser	Provides SQL Server	Started	Automatic (Delayed Start)	Local Service		
		1	III					

Note: If SmartConnector and the connected database server are located on the same physical server, we recommend changing that the Startup Type to "Automatic (Delayed Start)".

- 3. Right click the "SmartConnectorService" entry and choose Properties.
- 4. Click the General Tab.
- 5. Confirm the Startup Type is **Automatic**.
- 6. Click the Log On tab.
- 7. Confirm that the "Local System account" is selected. This may be different depending on the database authentication type you chose earlier.
- 8. Click the Recovery tab.
- 9. Set First failure to: Restart the Service

We recommended that you choose at least one recovery action in the event that the SmartConnector Service experiences a failure. At a minimum, "Restart the Service" should be selected.

General	Log On	Recovery	Depend	lencies	
Select t	the compu	ter's respons	e if this se	ervice fails. <u>Help me set up rec</u>	overy
First fail	ure:		Restart	the Service	~
Second	failure:		Take N	lo Action	~
Subseq	uent failur	es:	Take N	lo Action	~
Reset f	ail count a	fter:	0	days	
Restart	service a	fter:	1	minutes	
Run p	ble action	s for stops wi	ith errors.	Restart Computer Options	h
Prog	ram;				
				Browse	
Com	mand line ppend fai	parameters:	d of comn	nand line (/fail=%1%)	

10. Select **OK** to save all changes



5.2.3 Change Default Credentials

By default, SmartConnector will enable SmartConnector Portal on the local machine. SmartConnector Portal, you must change the default password to a new password.

- 1. Open a web browser
- 2. Navigate to <u>http://localhost:8082</u>
- 3. At the Login Page, enter the default user credentials of:
 - Username: admin Password: Admin!23

At this point you will be presented with the Change Password Page as show below.

Status Contigurations - EWS Serve	s Setup + About	Logged in as admin +
Change Password		
Your password has expired and you must change it before co	Shuing.	
	Current Password*	
	New Password*	
	Confirm New Password	
	Charge Password &	
chneider		
Schneider Electric		

- 4. Enter the default password as the Current Password.
- 5. Enter a new password. Portal passwords are required to be at least 6 characters in length and contain a mix of upper case, lower case, numeric, and at least one non- alphanumeric character.
- 6. Confirm the password you entered in step 5.
- 7. Click Change Password.
- 8. Re-authenticate (Login) with your Username and new password.



5.2.4 Install SmartConnector Framework Runtime License

SmartConnector Framework requires a license in order to run. After changing the default password, navigating to any page of SmartConnector Portal will return the user to the Install License page where a runtime license must be installed.

I. SmartConnector Connected to the Web

If the Windows machine with SmartConnector Framework detects an active internet connection, the Install SmartConnector License page will automatically be displayed. Once authenticated with the License Manager, you only need to enter a License Claim Token to "claim" the runtime license and it will be automatically installed.

Alternatively, the user may click "Upload License" to manually upload an already obtained license file. License Claim tokens and license files can be obtained from www.smartconnectorserver.com.



II. SmartConnector Not Connected to the Web

If SmartConnector fails to detect an active internet connection, the Install License page shown below will be displayed.

Directions are provided on how to download a license file from www.smartconnectorserver.com.

III. Obtain a license when you do not have a Claim Token

If you do not have a claim token then you can download a License for SmartConnector Framework via a file and the Thumbprint of the machine SmartConnector Framework has been installed on.

- 1. From the "I do not have a License Claim Token section of the SmartConnector License page"
- 2. Copy the Machine Thumbprint into the Windows clipboard for use later
- 3. Click on the navigate here button in this section, this will connect you to the License Depot web page
- 4. Log on to the License depot web page with your smartconnectorserver.com credentials
- 5. Scroll down until you see the Runtime v2.5 Commercial License
- 6. Select the download button to obtain the License file



7. Complete the Download License form

Linema Dapat Desertinet Confer FAG			
Download License			
Schneider Electric SituartConnector v2.5 Connercial License			
Present complete the relationing entertained appear provide the complete the provident complete the second se		Category	
Unland Kingdom		Augent Carital	
Subbos Provider T			
Reference Disches			
Building-Job Name *		Business Segment	
ABCD		Mining Minanals Malamans	•
InsetConnector Deployment License Parchase Online, Involue, or Order Confirmation Nur	ther *		
12346			
Mechine Thumburne *	-		
Maintee Thereppint is required	_		
O-mental literate D			

- 8. Paste in the machine thumbprint from the Windows clipboard (copied earlier)
- 9. Save the downloaded License file
- 10. Return to the Install SmartConnector License page
- 11. Select Upload License
- 12. SmartConnector Framework is now successfully licensed

D http://loca	lhost 8082/	,D = C Ø SmartConnector	× Ø SmartConnector Server	G & 1
1 Miles	Status Configurations -	EWS Servers Setup → A	bout	Logged in as admin +
Status	3			
Refresh C	hreads Active Endpoints	Managed Clients Configuratio	in Requests EWS Server Requests	
#	Status	Elapsed Time (hh:mm:ss)	Processor Configuration	
1	Waiting For Work			
2	Waiting For Work			

13. The SmartConnector Framework status page will appear

IV. Confirm Settings

SmartConnector installs the service with some default settings. After changing the password, you should confirm the system settings meet the criteria for how SmartConnector Framework will be used.

- 1. Open any web browser
- 2. Navigate to http://localhost:8082
- 3. Authenticate with the credentials you used in the prior section.
- 4. From the menu, click **Setup -> Service Settings**.
 - To edit any field, you can either click the edit icon or click the Edit All button.



- *i.* The default settings will be acceptable for the initial installation of SmartConnector *Framework.*
- *ii.* Users should use good security practices to define the expiration time for user Passwords.
- *iii.* The EWS Portal address can also be modified here from the default port used 8082.
- 5. Review and/or change values as desired. Unless otherwise noted, changes made here will take effect without a service restart.

Instance Name	 Appears in the browser tab and can be useful to distinguish which SmartConnector instance you are looking at if you are connecting to multiple deployed instances from a single browser.
Logging Level	– Maximum level SmartConnector will log. Possible values are
	conjunction with Logging Filters to control how much information
Password Age	- The maximum number of days before a Portal user's password
Limit	will expire.
Portal Address Processor	 Address of SmartConnector Portal. For security concerns, the default value will be 127.0.0.1 which means the portal can only be accessed from the local machine. If broader access is required, this value can be modified by using the "+ syntax" e.g. http://+:8082. This will allow access to any IP or DNS which resolves to the local machine. If you plan to secure the endpoint with a certificate, then the protocol shown here should be changed to https to match. Entering an empty value will disable the portal. Use caution! Consult the Security Considerations for suggestions on how best to configure this. The maximum amount of time a Processor Configuration is
Runtime Limit	given to complete before it is deemed to be unresponsive and is terminated. Unless otherwise instructed this value should not need to be modified.
Worker Manager Sleep	 The amount of time that the Worker Manager will idle before determining if there are Processors that need to be invoked. Unless otherwise instructed this value should not need to be modified.
Worker Thread	Count – The number of concurrent Processors that can be executed. This number may be increased but is largely dependent on the host machine's number of logical processors. To determine the number of logical processors, open a command prompt and enter the command: WMIC CPU Get DeviceID,NumberOfCores,NumberOfLogicalProcessors. While you can set this value greater than the number of logical processors, it represents the number of concurrent workers that can run without potential operating system queuing. You will need to restart the SmartConnector Service for this change to take effect.

6. After you have made the necessary changes, click Save to save them to the database.



6. BA Asset Health SmartConnector Extension Installation

6.1 Request API credentials

Please request for API credentials by filling out this form: https://forms.office.com/e/jiDUJrQZ8d

It might take some time to process the request, we appreciate your patience with us.

6.2 Downloading the BA Asset Health Extension

Please send a request to <u>isc.uk@schneider-electric.com</u> to request the latest version of BA Asset Health Extension with the following template:

Subject: Request for ISC.EcoStruxureBuildingAdvisorDiagnostics extension **Body**: Hi, we would like to request the latest version of the ISC.EcoStruxureBuildingAdvisorDiagnostics Extension and would also like to request for a Claim Token for the extension.



6.3 Installing the BA Asset Health Extension

- 1. Extract the files from the zip file to a temporary directory
- 2. Right click on each file and select Properties
- 3. Verify the file is not blocked see screen shot below; if the file is blocked, select **Unblock**

Unknown application Change							
C:\Program Files (x86)\Schr	neider Electric\SmartCor						
460 KB (471,040 bytes)							
460 KB (471,040 bytes)							
Thursday, January 31, 2019	, 9:50:02 AM						
Thursday, January 31, 2019	9:45:31 AM						
Thursday, January 31, 2019	9:50:02 AM						
Read-only Hidden	Advanced						
This file came from another computer and might be block help protect this computer.	ked to Unblock						
	C:\Program Files (x86)\Schr 460 KB (471,040 bytes) 460 KB (471,040 bytes) Thursday, January 31, 2019 Thursday, January 31, 2019 Thursday, January 31, 2019 Read-only Hidden Ihis file came from another computer and might be bloc help protect this computer.						

4. Copy the files to the installed directory for SmartConnector Framework (e.g., *C:\Program Files (x86)\Schneider Electric\SmartConnector*)

6.4 Licensing the BA Asset Health Extension

- 1. Ensure you have received the Claim Token from previous step
- 2. Log in to www.smartconnectorserver.com
- 3. Click on License Depot
- 4. Click on the Claim button
- 5. Fill out the License Claim Token
- 6. Fill out the **Thumbprint**

NOTE: You can get the thumbprint from the SmartConnector admin portal typically located on <u>https://localhost:8082</u>

Click on **Setup** -> **Licenses** and then on the **Thumbprint** button

- 7. Once License Claim Token and Thumbprint have been entered, please fill out the rest of the form and then click on **Claim License**
- 8. Go to the SmartConnector admin portal typically located on https://localhost:8082
- 9. Click on **Setup** -> **Licenses** and then click on the **Add** button
- 10. Locate the license "Building Analytics Diagnostics.lic" you recently downloaded
- 11. Ensure the license with Assembly Name "ISC.EcoStruxureBuildingAdvisorDiagnostics" is present and not expired

â	ISC.EcoStruxureBuildingAdvisorDiagnostics	1.*.*	No custom features	karim.hussain@schneider- electric.com	Never expires
---	---	-------	--------------------	--	---------------



6.5 Configure BA Asset Health SmartConnector SetupProcessor

- 1. Log into the **SmartConnector Portal**. If it the SmartConnector is installed on the same machine use https://localhost:8082
- 2. Select Configurations -> Processor

6		Status	Configurations	- EWS Servers	Setup - About	Logged in	as admin -
Sta	tus		Processor Endpoint				
Refrest Proce	n 🕄 essor Thr	eads	Active Endpoints	Managed Clients	Configuration Requests	EWS Server Requests	
#		Status		Elapsed Time (hh:mm:ss)	Processor Configuration		
1		Waiting I	For Work				
2		Waiting I	For Work				
3		Waiting I	For Work				
4		Waiting I	For Work				
5		Waiting I	For Work				
					5 items present		



3. From the Processor Configurations Page, press the Add New + button.

Status	Configurations - EW	'S Servers Setup -	About	Logged in a	as admin -					
Processor Configurations										
Refresh 🗘 Add New 🕂										
	Name	Execution Count	Last Execution Time (hh:mm:ss)	Total Execution Time (hh:mm:ss)	Description					
No data is available.										
0 items present										





4. From the Add Processor Configuration Page, Select the ISC.EcoStruxureBuildingAdvisorDiagnostics Assembly

1	Status	Configurations -	EWS Servers	Setup +	About	Logged in as admin +
Add Pro	oces	ssor Con	figuratio	on		
Back Next	Cancel					
Step 1 - Pi	ck an	assembly				
ISC.EcoStruxur	eBuilding/	AdvisorDiagnostics				2 candidates
Assembly Descript	ion					
EcoStruxure Build	ling Advis	or Diagnostics				
Assembly Company	у					
Schneider Electric	;					
Assembly Copyrigh	ht					
Schneider Electric	: 2023					
Assembly Version						
1.1.0.1627						
Schnei	der	•				

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Electric

- 5. Click Next.
- 6. Choose **the ISC.EcoStruxureBuildingAdvisorDiagnostics.SetupProcessor** class and press the **Next** button.

tact Schneider Electric for details

S	Status	Configurations -	EWS Servers	Setup 🗸	About				Logged in as admin -
Add F	roce	ssor Con	figuratio	on					
Back Next	Cancel	a							
Step 2 -	Choose	a Class							
ISC.EcoStru	ISC. EcoStruxureBuildingAdvisorDiagnostics.DiagnosticsProcessor								
ISC.EcoStru	ISC. EcoStruxureBuildingAdvisorDiagnostics. SelupProcessor								



7. Use existing or modify Name and Description for this configuration and press the **Finish** button.



8. On the Process Configuration Page, Click on the **Details** Tab.

rocos	sor Configuration	
TUCES	sor comgutation	
	nua 🕂 Cancel 4	
me Ruilding Analytic	ce Diagnostice Satur Processor	
Juliany Paraly in	te billighteatre detup i hoosadh	
scription		
Ensures the pre	esence of an EWS Server and objects as learned from the BAAPI.	
Processor	Details Control History Schedule	
Expand A	All Collapse All	
Expand A	All Cutapse At	
Expand A	U Collapse As Details	ß
Expand A	M Collupie AX Details O Evs Server Address * http://localhot.8100/EcoStusure/DataExchange	G
Expand A	Collapse At Details O Evs Server Address * http://localhost.8100/EcoStrucure/DataExchange Exes Server Manne *	G
Expand A	M Collapse Ak Details C Ews Server Address * http://localhots.8100/EcoStruxure/DataExchange Ews Server Name * Ews Server Name * Building Analytics Diagnostics Server	G
Expand A	M Collapse Ak Details C Evs Server Address * http://iocalhost.8100/EcoStrucure/DataExchange Evs Server Name * Building Analytics Diagnostics Server	G G
Expand A	M Collapse As Details C Eves Server Address * Eves Server Name * Building Analytics Diagnostics Server M transitions in	G
Expand A	M Collapse Ak Details	G
Expand A	U Collepse Al Defails C Eves Server Address * http://localitost.8100/EcoStruxure/DataExchange Eves Server Name * Building Analytics Diagnostics Berver User Name * admin	۲ ۲ ۲
Expand A	U Collapse Al Defails C Evs Server Address * http://localhost.8100/EcoStruure/DalaExchange Evs Server Name * Building Analytics Diagnostics Berver U User Name * admin	G
Expand A	U Collapse Al Details Eves Server Address * http://localhost.8100/EcoStrucure/DataExchange Eves Server Name * Euiding Analytics Diagnostics Server User Name * admin Password * Events in	G G

- 9. Set the "Password" to something you can remember.
- 10. Fill out the following properties:
 - Building Advisor Endpoint Address. <u>https://rest.buildingsapi.net</u>
 - Subscriber Key: Enter the Subscriber Key you received earlier
 - Client Id: Enter the id for the client you wish to connect
 - i. In order to get the Client Id you need to issue an API request and filter the response. See below cURL command example:

curl -v -X GET "https://rest.buildingsapi.net/core-base/clients/" -H "Cache-Control: no-cache" -H "Ocp-Apim-Subscription-Key: your-subscriber-key-here"

- Open Task Days: 120
- In Process Task Days: 120
- **(OPTIONAL) Buildings**: Leave empty for all buildings in this client. For select buildings, add a new row with Building Id for each building you want to connect.
- 11. Click Save.
- 12. Then click the **Validate** button and fix any errors which are displayed
- 13. Click the Start button to run the SetupProcessor and wait until completion.

Note: The SetupProcessor only needs to be run once unless you want to onboard additional clients to the same EWS Server. If you want that, just change the Client Id, run again, and wait until completion.



6.6 Configure and run BA Asset Health SmartConnector DiagnosticsProcessor

- 1. Log into the **SmartConnector Portal**. If it the SmartConnector is installed on the same machine use https://localhost:8082
- 2. Select Configurations -> Processor

(S.	Status	Configurations	- EWS Servers	Setup -	About		Logged in as admin -
S	tatus		Processor Endpoint					
R	efresh Ø Processor Thre	eads	Active Endpoints	Managed Clients	Configu	ration Requests	EWS Server Requests	
	#	Status		Elapsed Time (hh:mm:ss)	Proces	sor Configuration		
	1	Waiting F	For Work					
	2	Waiting F	For Work					
	3	Waiting F	For Work					
	4	Waiting F	For Work					
	5	Waiting F	For Work					
					5 items p	present		



3. From the Processor Configurations Page, press the Add New + button.

1	Status	Configurations -	EWS Servers	Setup -	About	Logged in a	as admin -			
Processor Configurations										
Refresh 🞜	Add New 🕂	I								
		Name	Execution	n Count	Last Execution Time (hh:mm:ss)	Total Execution Time (hh:mm:ss)	Description			
No data is availa	ble.									
0 items present										





4. From the Add Processor Configuration Page, Select the ISC.EcoStruxureBuildingAdvisorDiagnostics Assembly

1	Status	Configurations -	EWS Servers	Setup -	About	Logged in as admin +
Add P	roces	ssor Con	figuratio	on		
Back Next	Cancel					
Step 1 - F	^p ick an	assembly				
ISC.EcoStrux	cureBuilding/	AdvisorDiagnostics				2 candidates
Assembly Descr	iption					
EcoStruxure Bu	ilding Advise	or Diagnostics				
Assembly Comp	any					
Schneider Elec	tric					
Assembly Copyr	ight					
Schneider Elec	tric 2023					
Assembly Versio	n					
1.1.0.1627						
Schne DEI		-				

5. Click Next.

C Electric

6. Choose **the ISC.BuildingAdvisorDiagnostics.DiagnosticsProcessor** class and press the **Next** button.

1	Status	Configurations -	EWS Servers	Setup -	About	Logged in as admin v				
Add F	Add Processor Configuration									
Back Nex	Cancel	a								
Step 2 -	Choose	a Class								
ISC.EcoStr	uxureBuilding	AdvisorDiagnostics.Dia	agnosticsProcessor							
ISC.EcoStr	uxureBuilding	AdvisorDiagnostics.Se	tupProcessor							
Schn	eide	r								

7. Use existing or modify Name and Description for this configuration and press the **Finish** button.



8. On the Process Configuration Page, Click on the Details Tab.

1	Status Configurations - EWS Se	rvers Setup + About	Logged in as admin 🕶
Proces	sor Configuratior	1	
Edit All 🗭 🛛 Sta	rt 🕨 Validate 🕑 Reset Counter 🎱 H	teset Timer 🗵 🔒	
ame		Is Active	
Building Analytic	s Diagnostics Processor	C True	* 2
escription			
Retrieves diagno	stic data from BAAPI and updates EWS S	erver model.	C
Processor	Details Control History S	chedule	
Expand A	Collapse All Intelails Ews Server Name * Building Analytics Diagnostics Se	iver	ß
	O User Name *		ß
	Password *		
	~ Encrypted ~		ß
	Building Advisor Endpoint A	Idress *	

- 9. Set the "Password" to the password you chose in the earlier step.
- 10. Fill out the following properties:
 - Building Advisor Endpoint Address. <u>https://rest.buildingsapi.net</u>
 - Subscriber Key: Enter the Subscriber Key you received earlier
 - **Client Id**: Enter the id for the client you wish to connect. Use the Client Id from <u>earlier</u> <u>step</u>, or use the following procedure:
 - i. In order to get the Client Id you need to issue an API request and filter the response. See below cURL command example:

curl -v -X GET "https://rest.buildingsapi.net/core-base/clients/" -H "Cache-Control: no-cache" -H "Ocp-Apim-Subscription-Key: your-subscriber-key-here"

- Open Task Days: 120
- In Process Task Days: 120

11. Click Save.



- 12. Click on the Schedule tab
- 13. Select the Schedule called "Every 15 minutes"
- 14. Click Save.
- 15. Click on the **Control** tab
- 16. Use the following configuration:
 - Runs On Start: True
 - Runs On Schedule: True
 - Manually Startable: True
 - Manually Stoppable: True

Processor Configuration	Status	Configurations -	EWS Servers	Setup -	About	Logged in as admin v
Edit AU (2) Stop II Validate (2) Reset Timer (2) Is Active Name is Active True Image: Control Contro Control Control Control Control Contro Control Control	Processor	Configur	ation			
Name Is Active Building Analytics Diagnostics Processor True Description True Retrieves diagnostic data from BA API and updates EWS Server model. If the server model. Processor Details Control History Schedule Manually Startable True If the server model. Runs On Start Manually Startable True If the server model.	Edit All 🗹 🛛 Stop 🔳	Validate 🗹 🛛 Reset Cou	inter 🥙 Reset Tim	ner 🛛 🗎		
Building Analytics Diagnostics Processor Inue Inue Inue Description Retrieves diagnostic data from BA API and updates EWS Server model. Image: Control History Schedule Processor Details Control History Schedule Runs On Start Manually Startable True Image: Control Image: Control	Name				Is Active	
Description Retrieves diagnostic data from BAAPI and updates EWS Server model. If the server model. Processor Details Control History Schedule Runs On Start Manually Startable True If the server model. Runs On Start Manually Startable True If the server model.	Building Analytics Diagn	ostics Processor		G	True	* 6
Retrieves diagnostic data from BA API and updates EWS Server model. Image: Control History Schedule Processor Details Control History Schedule Runs On Start Manually Startable True * Image: Control History True * Image: Control History	Description					
Processor Details Control History Schedule Runs On Start Manually Startable True + IG Runs On Schedule Manually Startable True + IG True + IG True + IG	Retrieves diagnostic dat	a from BA API and upda	ates EWS Server m	odel.		G
Runs On Start Manually Startable True True <	Processor Details	Control His	tory Schedule			li
True True True Runs On Schedule Manually Stoppable True * 100	Runs On Start				Manually Startable	
Runs On Schedule Manually Stoppable	True			• 🗹	True	• 🗹
True True True	Runs On Schedule				Manually Stoppable	
	True			• 🗹	True	• 🗹

- 17. Then click the Validate button and fix any errors which are displayed
- 18. Click the **Start** button to run the DiagnosticsProcessor and wait for completion.



7 BA Asset Health Extension with EcoStruxure Building Operation

7.1 Connect EWS Server with EcoStruxure Building Operation

- 1. Log in to the EcoStruxure Building Operation system
- 2. Right-click in the top of the system tree and select New -> Interface
- 3. Select WebService -> EcoStruxure WebService and rename the object, then click Create
- 4. Edit properties of your new EcoStruxure WebService and enter the following properties:
 - a. User name: Enter the User name configured in earlier steps
 - b. Password: Enter the Password configured in earlier steps
 - c. Confirm password: Repeat the password entered above
 - d. Service URL: Enter the Ews Server Address as configured in SetupProcessor
 - e. Enable communication: Enable
- 5. Click Save

7.2 Host EWS objects in EcoStruxure Building Operation

- 1. Make sure the EcoStruxure WebService interface is online
- 2. Navigate in the System Tree and go to **System -> Hardware -> EcoStruxure Web Services** and find the object with the same name as your EcoStruxure Web Service
- 3. Click on the EcoStruxure Web Service with the name you previously entered
- 4. Right-click on "Building Analytics Diagnostics Server" and select "Host EWS Objects..."
- ← ・ → ・ Server 1 ト System ト Hardware ト EcoStruxure Web Services ト Building Advisor Asset H



- 5. Select the EWS Interface you created earlier and click "Select"
- 6. After completion, all objects will be found in the EWS Interface from where you can use for multiple use cases within EBO such as in graphics or programs



7.3 Display data in graphics

The datapoints provided by the BA Asset Health Extension can be used to be displayed in graphics. EcoStruxure Building Operation 3.2 has built in Widgets that can be used for display. We also provide a Graphics Pack that you can use to extend the existing library.

7.3.1 BA Asset Health Widget Graphics Pack

- 1. Download the latest BA Asset Health Widget Graphics Pack using this link: <u>BA Asset Health</u> <u>Widget Graphics Pack.zip</u>
- 2. Import the graphics templates wherever you wish in the EBO system
- Import the Binding Template by navigating to System -> Binding Templates then right-click and select "Import..." and select the "BA Asset Health Widget Graphics Package Binding Template"



7.3.2 Building Summary Widget

- 1. Duplicate the "Building Summary Widget Template" for each building
- 2. Edit the duplicated "**Building Summary Widget**" and edit the public property for "**Building Name**" so it matches a building name in the EcoStruxure Web Services Interface
- 3. Right click and select Edit Bindings on the "Building Summary Widget"
- 4. Drag and drop the folder for the building located in the EcoStruxure Web Services Interface into the "BA Asset Health Widget Graphics Package Binding Template"

System Iree • 4 ×	Bindings: Demo Building Summary Wi	dget ×		
V D	💼 🍸 🗈 🕞 🛦 💱 🕂 🛛 Quick fil	lter		
System	Binding template	Description		
E Servers	Default name matching	Match according to name string		Drop here to apply
General Advisor Asset Health General Advisor Asset Health General Advisor Asset Health	BA Asset Health Widget Graphics Package Bi			Drop here to apply
🖻 🗑 Demo Building	BA SmartConnector			Drop here to apply
🖻 🧰 Debug	MapsNavigator 2.0.2			Drop here to apply
▲ Dev ▷ A Ready	Modul Börvärde Lite	Används vid tredjepart eller lega	y integration av My	Drop here to apply
Al Ready Lite	Name to Name			Drop here to apply
Akademiska Hus	Path Matching Binding Template			Drop here to apply
A SmartConnector	Överstyrning Script Aktuella Värden			Dron here to apply
Widgets Building Summary Widget Template	Binding point	Unit	Binding	
Demo Building Summary Widget	🤌 Demo Building Summary Widget			Drop or type here to bind
ECM Widget Template				

2

 \times

5. After waiting for the bindings to complete, click OK on the dialogue

-	~ ~			
100	Cont	Irm B	Ind	ngs

Binding point	Binding	Acti	on	-
Active Chilled Beam.Clos	~/Building Advisor Asset Health/Building A	1	Bind	
Active Chilled Beam.Clos	~/Building Advisor Asset Health/Building A	1	Bind	
Active Chilled Beam.Curr	~/Building Advisor Asset Health/Building A	1	Bind	
Active Chilled Beam.Desc	~/Building Advisor Asset Health/Building A	1	Bind	
Active Chilled Beam.In Pr	~/Building Advisor Asset Health/Building A	1	Bind	
Active Chilled Beam.In Pr	~/Building Advisor Asset Health/Building A	1	Bind	
Active Chilled Beam.Nam	~/Building Advisor Asset Health/Building A	1	Bind	
Active Chilled Beam.Oper	~/Building Advisor Asset Health/Building A	1	Bind	
Active Chilled Beam.Total	~/Building Advisor Asset Health/Building A	1	Bind	
Active Chilled Beam.Total	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Custom.Closed Task	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Custom.Closed Task	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Custom.Current Op	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Custom.Descr	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Custom.In Process 1	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Custom.In Process 1	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Custom.Name	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Custom.Open Tasks	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Custom.Total Avoid	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Custom.Total Fault (~/Building Advisor Asset Health/Building A	1	Bind	
AHU Exhaust.Closed Task	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Exhaust.Closed Task	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Exhaust.Current Op	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Exhaust.Descr	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Exhaust.In Process T	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Exhaust.In Process T	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Exhaust.Name	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Exhaust.Open Tasks	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Exhaust.Total Avoid	~/Building Advisor Asset Health/Building A	1	Bind	
AHU Exhaust.Total Fault (~/Building Advisor Asset Health/Building A	1	Bind	
AHU with Economizer.Cl	~/Building Advisor Asset Health/Building A	1	Bind	
	(D. Chiller & Ark Group Arrest Line Inter (D. Chiller & A		D: 1	-



6. **Save** the changes to the graphics, then open the graphic and verify all bindings seems accurate. Fix any missing bindings manually

Demo Building

	Faults	Costs	Open	Costs	In Process	Costs	Closed	Savings
Active Chilled Beam Active chilled beam (supplied by an air handler)	28	0	0	0	0	0	0	0
AHU Single stream air handler or roof top unit with no	24	1	0	0	3	0	1	0
AHU Custom Custom air handler	2	0	0	0	0	0	0	0
AHU Exhaust Exhaust air handler without heat recovery	1	0	0	0	0	0	0	0
AHU with Economizer Single stream air handler with economizer	17	0	4	0	0	0	0	0
Boiler Hot Water Hot water boiler (gas-fired, electric, or other)	1	0	0	0	0	0	0	0
Chiller Water Cooled	1	0	0	0	0	0	0	0
CHW Primary Loop Primary chilled water loop	1	4	0	0	0	0	0	0
CHW Secondary Loop Secondary chilled water loop	2	0	0	0	0	0	0	0
Cooling Plant A building or zone cooling plant, including primar	0	0	0	0	0	0	0	0
Cooling Tower Open Cooling tower with condenser water open to outdoor	0	0	0	0	0	0	0	0
CW Primary Loop Primary condenser water loop	1	0	0	0	0	0	1	0
Electric Utility	0	0	0	0	0	0	0	0
Fan Coil Unit Fan coil unit (not supplied by an air handler)	5	0	1	0	2	0	0	0
Fan Exhaust Exhaust Fan	1	0	0	0	0	0	0	0
Fan Return Return fan for air handler(s)	0	0	0	0	0	0	0	0
Fan Supply Supply Fan	2	0	0	0	1	0	0	0
Filter Supply Air A filter in a Supply air stream	0	0	0	0	0	0	0	0
Filter Zone Supply Air A filter in a zone supply air stream	0	0	0	0	0	0	0	0
Heat Exchanger Chilled Water Heat exchanger between primary (chiller side) and	0	0	0	0	0	0	0	0
Heating Coil A heating coil on an air handler	0	0	0	0	0	0	0	0
HW Heating Plant A building or zone heating plant, including primar	0	0	0	0	1	0	0	0
HW Primary Loop Primary HW loop	1	0	0	0	0	0	0	0
HW Primary Loop Primary HW loop	1	0	0	0	0	0	0	0
HW Secondary Loop Secondary HW loop	0	0	0	0	0	0	0	0
Outdoor Conditions Outdoor air conditions, such as temperature, relat	0	0	0	0	0	0	0	0
Pump CHW Secondary Chilled water pump on secondary chilled water loop	0	0	0	0	0	0	0	0
Pump Condenser Dedicated chiller/HP pump	0	0	0	0	0	0	0	0
Pump Evaporator Dedicated chiller/HP pump	0	0	0	0	0	0	0	0
Pump HW Boiler Hot Water Boiler Pump	0	0	0	0	0	0	0	0
Pump HW Primary Hot water pump on primary hot water loop	0	0	0	0	0	0	0	0
Return Air Duct Return Air Duct	0	0	0	0	0	0	0	0
VAV CAV Box Variable or constant air volume terminal unit	59	0	1	0	3	0	1	0
VAV CAV System A system consisting of an air handler and associat	0	0	0	0	0	0	0	0
Whole Building Utilities Collection of points from multiple utility meters	0	0	0	0	0	0	0	0



7.3.3 ECM Widget

- 1. Duplicate the "ECM Widget Template" for each building
- 2. Edit the duplicated "ECM Widget" and edit the Exposed Property for "Equipment category" to your liking
- Continue editing the Exposed Properties "RowItem n Name" and name each of these to an equivalent name of equipment you can find in the EcoStruxure Web Services Interface
 Properties
 ¥ ×

•		
~	Exposed Properties	
	Width	950.0
	Height	1070.0
	Tooltip, Text Color	#000000
	Tooltip, Background	#FFFFE6
	Tooltip, Show Background	Visible
	Tooltip, Text	
	Tooltip, BindName	TooltipText
	Equipment category	Mixed equipment Demo site
	maxLength	18
	Decimals	0
	EditModeText	Value
	BindName	
	Rowltem 1 Name	AHU1P21 (CL005177)
	Rowltem 2 Name	AHU2P23 (CL004837)
	Rowltem 3 Name	AHU3P47 (CL005011)
	Rowltem 4 Name	AHU3P48 (CL005021)
	Rowltem 5 Name	AHU331 (CL005303)
	Rowltem 6 Name	AHU332 (CL005306)
	Rowltem 7 Name	AHU351 (CL004947)
	Rowltem 8 Name	AHU381 (CL005202)
	Rowltem 9 Name	AHU382 (CL005213)
	Rowltem 10 Name	AHU391 (CL004938)
	Rowltem 11 Name	AHU441 (CL005041)
	Rowltem 12 Name	AHU491 (CL004978)
	Rowltem 13 Name	AHU512 (CL005200)
	Rowltem 14 Name	AHU521 (CL004860)
	Rowltem 15 Name	AHU522 (CL004858)
	Rowltem 16 Name	MZU211 (CL005869)
	Rowltem 17 Name	MZU222 (CL005363)
	Rowltem 18 Name	MZU244 (CL00)
	Rowltem 19 Name	MZU341 (CL004915)
	Rowltem 20 Name	MZU381 (CL005210)
	Rowltem 21 Name	MZU412 (CL005500)
	Rowltem 22 Name	MZU451 (CL004985)
	Rowltem 23 Name	MZU482 (CL005268)
	Rowltem 24 Name	MZU551 (CL005154)
	Rowltem 25 Name	MZU581 (CL004928)
~	General	
	ld	



- 4. Right click and select Edit Bindings on the "ECM Widget"
- 5. Drag and drop the folder for the building located in the EcoStruxure Web Services Interface into the BA Asset Health Widget Graphics Package Binding Template

System Tree	- ↓ ×	Bindings: ECM Widget Template ×						
		💼 7 🗈 G 🛦 았 🕂 😡	k filter					
Server 1 System		Binding template	Description					
		Default name matching	Match according to name	e strings	Drop here to apply			
Guilding Advisor Asset Health Guilding Analytics Diagnostics Server		BA Asset Health Widget Graphics Package	A Asset Health Widget Graphics Package Bi					
Demo Building		BA SmartConnector			Drop here to apply			
Debug		MapsNavigator 2.0.2	Drop here to apply					
∠ Dev		Modul Börvärde Lite	Används vid tredjepart ell	er legacy integration av My	Drop here to apply			
Al Ready		Name to Name			Drop here to apply			
Akademiska Hus		Path Matching Binding Template			Drop here to apply			
A BA SmartConnector		Översturning Scrint Aktuella Värden			Oron here to annly			
 Widgets Building Summary Widget Template 		Binding point	Unit	Binding				
Demo AHUS ECM Widget		🖋 ECM Widget Template			Drop or type here to bind			
Demo Building Summary Widget		Bindings						
CM Widget Template								

6. After waiting for the bindings to complete, click OK on the dialogue

Rinding point	Rinding	Actio		
AUU1021 (CL005177) Cla	(Building Advisor Asset Legith (Building A	ACTIC	Diad	
AHUTP21 (CL005177).CIO	~/Building Advisor Asset Health/Building A (Building Advisor Asset Health (Building A)		Bind	
AHUTP21 (CLU05177),CIO	~/Building Advisor Asset Health/Building A	N	Bind	
AHU1P21 (CL005177).Cor	~/Building Advisor Asset Health/Building A		Bind	
AHU1P21 (CL005177).Cur	~/Building Advisor Asset Health/Building A	V	Bind	
AHU1P21 (CL005177).Des	~/Building Advisor Asset Health/Building A	V	Bind	
AHU1P21 (CL005177).Ene	~/Building Advisor Asset Health/Building A	1	Bind	
AHU1P21 (CL005177).In P	~/Building Advisor Asset Health/Building A	1	Bind	
AHU1P21 (CL005177).In P	~/Building Advisor Asset Health/Building A	1	Bind	
AHU1P21 (CL005177).Mai	~/Building Advisor Asset Health/Building A	1	Bind	
AHU1P21 (CL005177).Nar	~/Building Advisor Asset Health/Building A	1	Bind	
AHU1P21 (CL005177).Opt	~/Building Advisor Asset Health/Building A	1	Bind	
AHU1P21 (CL005177).Tota	~/Building Advisor Asset Health/Building A	1	Bind	
AHU1P21 (CL005177).Tota	~/Building Advisor Asset Health/Building A	1	Bind	
AHU2P23 (CL004837).Clo	~/Building Advisor Asset Health/Building A	1	Bind	
AHU2P23 (CL004837).Clo	~/Building Advisor Asset Health/Building A	1	Bind	
AHU2P23 (CL004837).Cor	~/Building Advisor Asset Health/Building A	1	Bind	
AHU2P23 (CL004837).Cur	~/Building Advisor Asset Health/Building A	1	Bind	
AHU2P23 (CL004837).Des	~/Building Advisor Asset Health/Building A	1	Bind	
AHU2P23 (CL004837).Ene	~/Building Advisor Asset Health/Building A	1	Bind	
AHU2P23 (CL004837).In P	~/Building Advisor Asset Health/Building A	1	Bind	
AHU2P23 (CL004837).In P	~/Building Advisor Asset Health/Building A	1	Bind	
AHU2P23 (CL004837).Mai	~/Building Advisor Asset Health/Building A	1	Bind	
AHU2P23 (CL004837).Nar	~/Building Advisor Asset Health/Building A	1	Bind	
AHU2P23 (CL004837).Ope	~/Building Advisor Asset Health/Building A	1	Bind	
AHU2P23 (CL004837).Tota	~/Building Advisor Asset Health/Building A	1	Bind	
AHU2P23 (CL004837).Tota	~/Building Advisor Asset Health/Building A	1	Bind	
AHU331 (CL005303).Close	~/Building Advisor Asset Health/Building A	1	Bind	
AHU331 (CL005303).Close	~/Building Advisor Asset Health/Building A	1	Bind	
AHU331 (CL005303).Com	~/Building Advisor Asset Health/Building A	1	Bind	
AHU331 (CL005303).Curre	~/Building Advisor Asset Health/Building A	1	Bind	
AHU331 (CL005303).Desc	~/Building Advisor Asset Health/Building A	1	Bind	
AHU331 (CL005303).Enerc	~/Building Advisor Asset Health/Building A		Bind	-
Matching Bindings: 325		ок		Cancel



7. **Save** the changes to the graphics, then open the graphic and verify all bindings seems accurate and correct if some bindings are missing

Equipment category

Equipment	Е	С	Μ	Yesterdays Faults	Daily Costs	Open Tasks	Annual Costs	In Process Tasks	Annual Costs	Closed 30 Days	Annual Savings
AHU1P21 (CL005177)	0	0	0	0	0	0	0	0	0	0	0
AHU2P23 (CL004837)	2	0	0	1	0	0	0	0	0	0	0
AHU3P47 (CL005011)	0	0	0	0	0	0	0	0	0	0	0
AHU3P48 (CL005021)	0	0	0	0	0	0	0	0	0	0	0
AHU331 (CL005303)	0	0	4	1	0	0	0	0	0	0	0
AHU332 (CL005306)	0	0	4	1	0	0	0	0	0	0	0
AHU351 (CL004947)	0	0	0	0	0	0	0	0	0	0	0
AHU381 (CL005202)	0	0	0	0	0	0	0	0	0	0	0
AHU382 (CL005213)	0	5	8	2	0	0	0	1	0	0	0
AHU391 (CL004938)	0	0	0	0	0	0	0	0	0	0	0
AHU441 (CL005041)	0	3	4	2	0	0	0	0	0	0	0
AHU491 (CL004978)	0	0	0	0	0	0	0	0	0	0	0
AHU512 (CL005200)	0	0	0	0	0	0	0	0	0	0	0
AHU521 (CL004860)	0	1	4	2	0	0	0	0	0	0	0
AHU522 (CL004858)	0	2	4	2	0	0	0	0	0	0	0
MZU211 (CL005869)	0	0	0	0	0	0	0	0	0	0	0
MZU222 (CL005363)	0	0	0	0	0	0	0	0	0	0	0
MZU244 (CL00)	0	0	0	0	0	0	0	0	0	0	0
MZU341 (CL004915)	0	0	0	0	0	0	0	0	0	0	0
MZU381 (CL005210)	0	0	0	0	0	0	0	0	0	0	0
MZU412 (CL005500)	0	0	4	1	0	0	0	0	0	0	0
MZU451 (CL004985)	0	0	0	0	0	0	0	0	0	0	0
MZU482 (CL005268)	0	0	0	0	0	0	0	0	0	0	0
MZU551 (CL005154)	0	0	0	0	0	0	0	0	0	0	0
MZU581 (CL004928)	0	0	0	0	0	0	0	0	0	0	0



8. Troubleshooting

8.1 SmartConnector Log File

SmartConnector includes integrated logging into log files where both SmartConnector extensions and the SmartConnector framework can log any messages that may be useful. These log files can be found generally in the directory *C:\ProgramData\SmartConector\Logs* on the machine where SmartConnector is installed.

In general, if you are having problems with SmartConnector or the extension, it may be necessary to increase the logging level, or enable additional logging filters.

1. To adjust the logging level, visit the Service Settings page and edit the Logging Level setting.

Service Sett	ings		
Refresh 🗯 🛛 Edit Al 🖾			
	Changing the values on this page may cause unpredicatable results including rendering this portal non-fu Please consult your documentation before making changes here.	nctional.	
Name	Description	Value	
Instance Name	Name of the service	SmartConnector	G
Logging Level	Application wide logging level	Trace	* G
Password Age Limit	Maximum number of days before a password must be changed	60	G
Portal Address	Address of the SmartConnector Portal	http://127.0.0.1.8082	G
Processor Runtime Limit	The maximum allowed lime (in seconds) a non-ILongRunningProcessor is given to complete before it is terminated as unresponsive	600	Ø
Worker Manager Sleep	Time in mSec which the worker manager will sleep while waiting for workers to complete or for new work to be available	5000	G
Worker Thread Count	Number of worker threads which are allocated to execute processes	5	G

2. To adjust the logging filters, visit the **Logging Filters** page. The logging filter most likely to pertain to this solution is *Processor*.



8.2 Framework Licensing Error

If you navigate to the SmartConnector portal and see a page similar to the below screenshot. This means that either you have not yet got a license for your SmartConnector framework, or your current license is no longer valid.



If you have not yet got a license for your SmartConnector framework:

Follow the instructions in the section Install SmartConnector Framework Runtime License

If you have already got a license for your SmartConnector framework:

The SmartConnector framework license is bound to a machine thumbprint. This machine thumbprint is a key generated from multiple hardware components of your machine, including the current network adapter that was being used when the license was generated. If you have switched to a different network adapter (e.g. going from a hard-wired connect to a WIFI connection), then it is very likely this machine thumbprint has changed. Please follow the section Install SmartConnector Framework Runtime License using your new thumbprint.

8.3 SQL Authentication Error

If SmartConnector cannot connect to its database, then the framework will fail to start. If you notice that the SmartConnector Server is not starting, or starting and instantly stopping, please review the SmartConnector logs for messages pertaining to SQL Authentication. If this is the case, you may need to make sure that your SQL Credentials are valid before starting the SmartConnector service.



9. Appendix A – SQL User Roles

The Windows user installing the SmartConnector Framework software must have 'dbcreator' and 'public' roles within SQL in order for SmartConnector Framework to install correctly.

During the installation process of SmartConnector Framework the database tables' necessary for configuring the system will be created.



Note: If the logged in Windows User did not have the proper SQL user roles during the installation process, the DB tables will not be created. You will need to uninstall then reinstall SmartConnector Framework to create the tables, once the Windows User has proper SQL roles defined. An attempt to perform an installation selecting "Modify" or "Repair" will not create the default DB for SmartConnector Framework.