

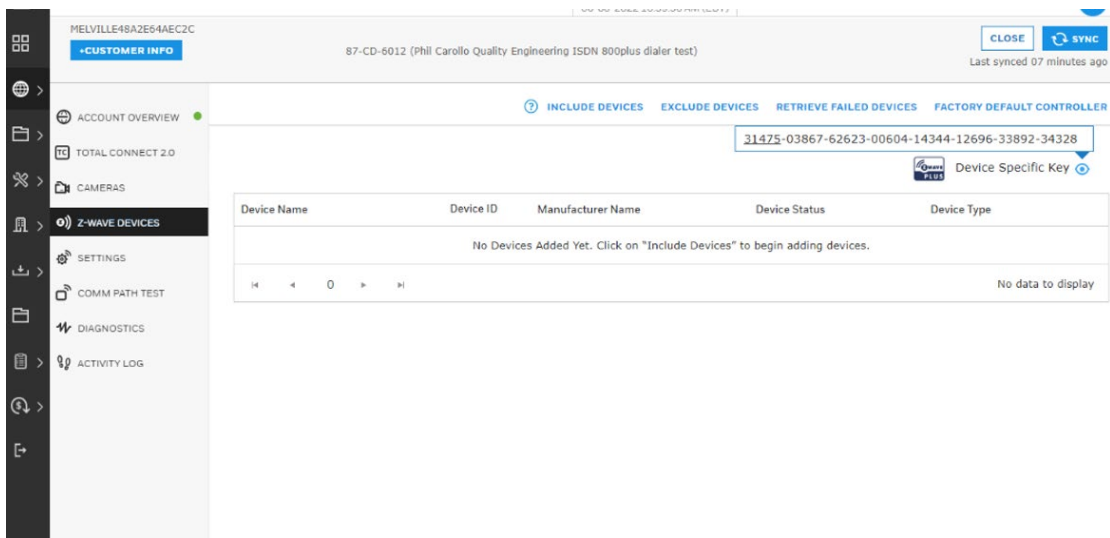
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D.1 CloudAPI – AN360

DSK (Device Specific Key)

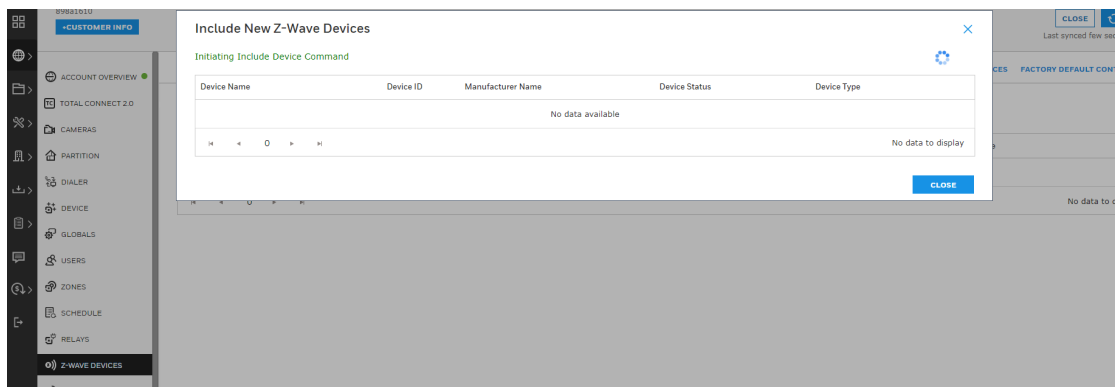
Once Z-Wave™ module is inserted and powered up, after syncing, DSK related information will appear, when hovering over to the icon , DSK detail will then pop up as below:



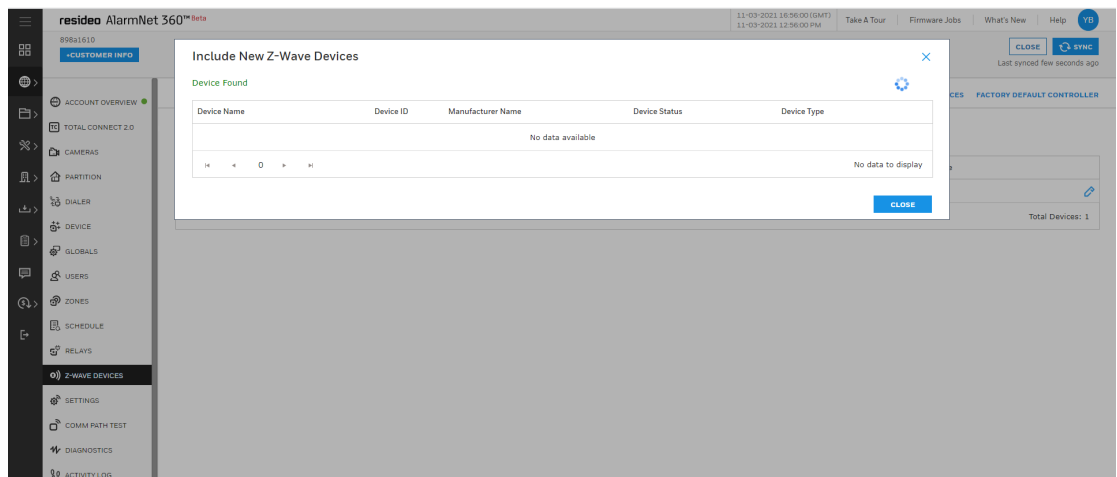
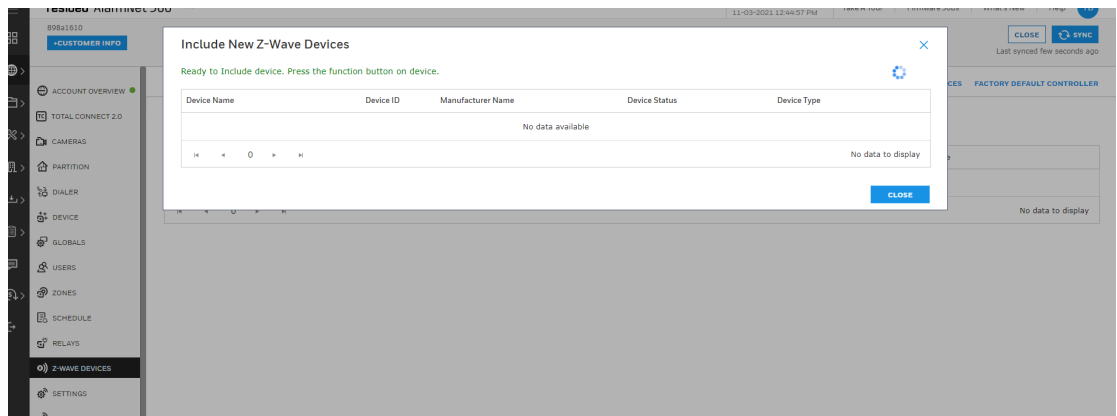
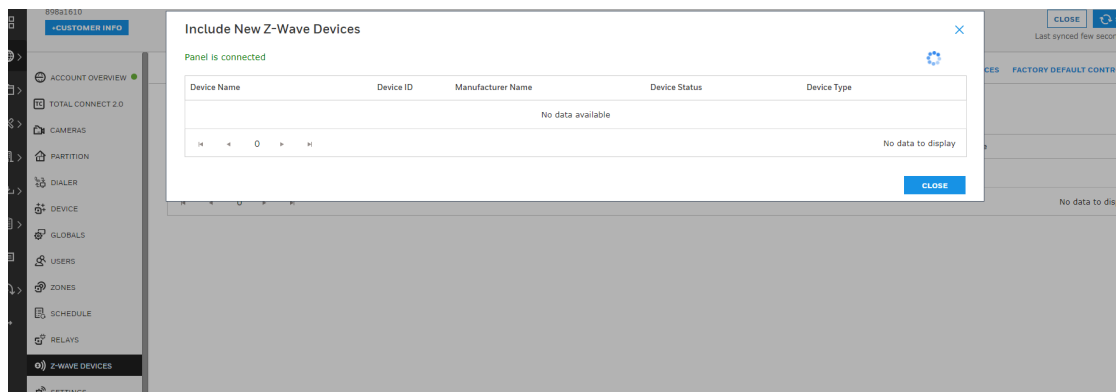
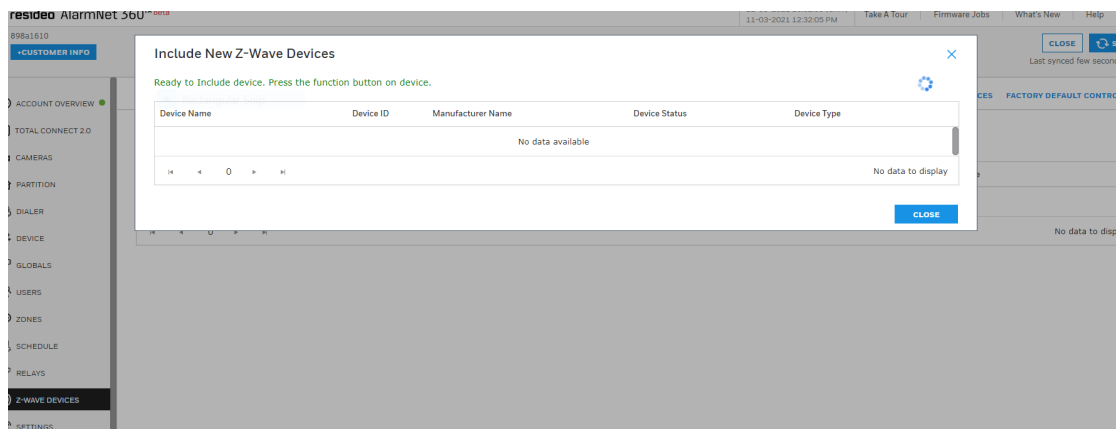
Inclusion

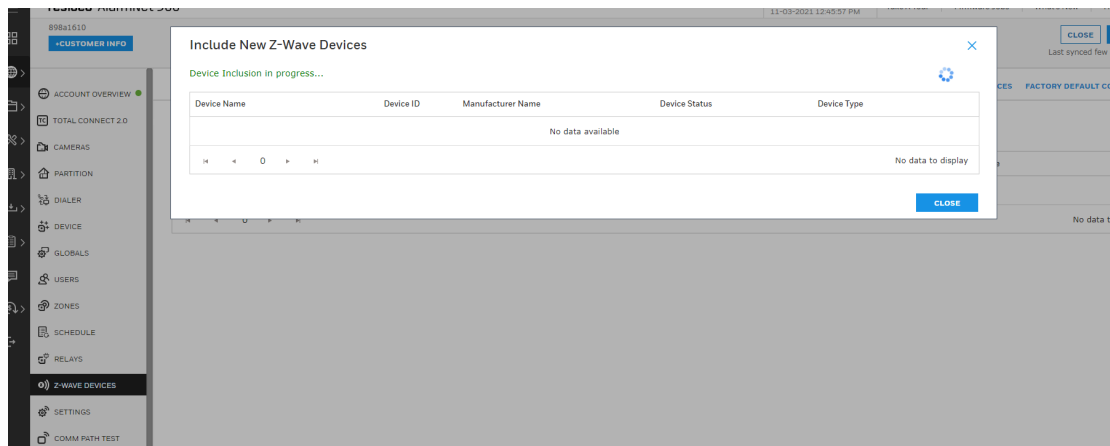
For inclusion one Z-Wave device is in add mode and the other one is in learn mode.

1. To include a Z-Wave device (Door lock, Switch, Dimmer...), click the **Include Device** button.

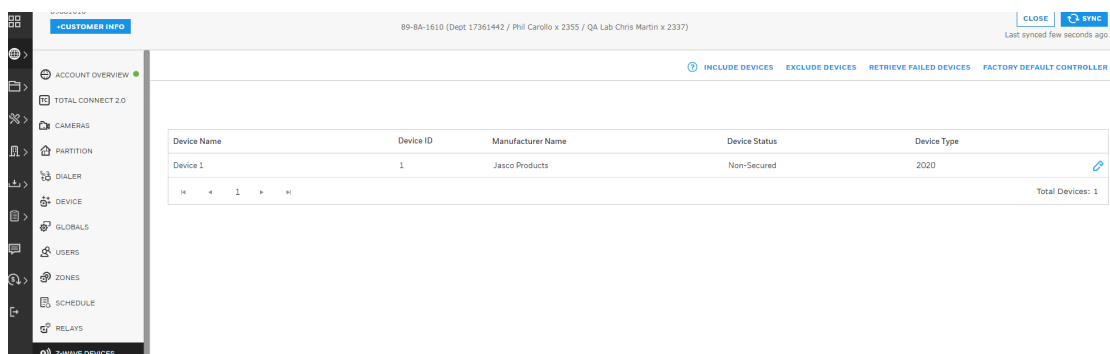


2. Press the Function button on the device that you want to include. Wait for the inclusion to end and the device information to display. Click **CLOSE**.





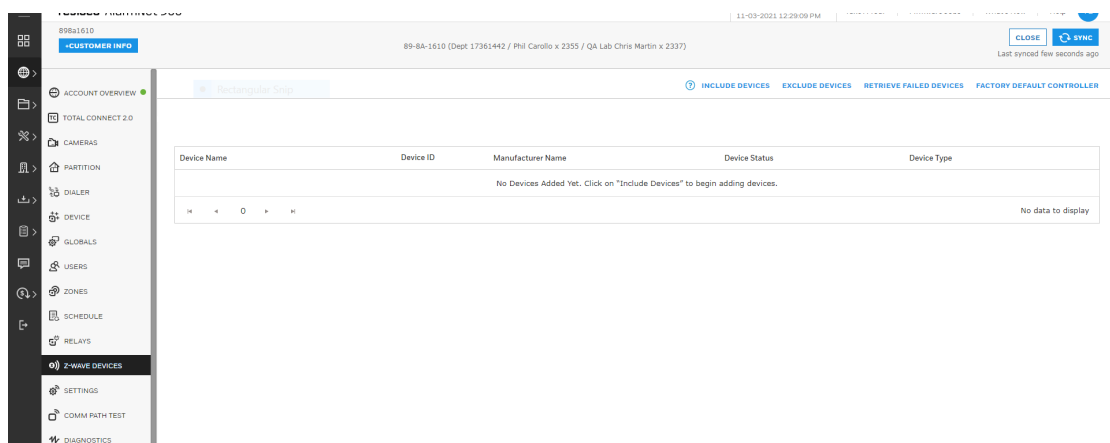
- When the process is complete, the newly registered device should appear in the Z-Wave device list.



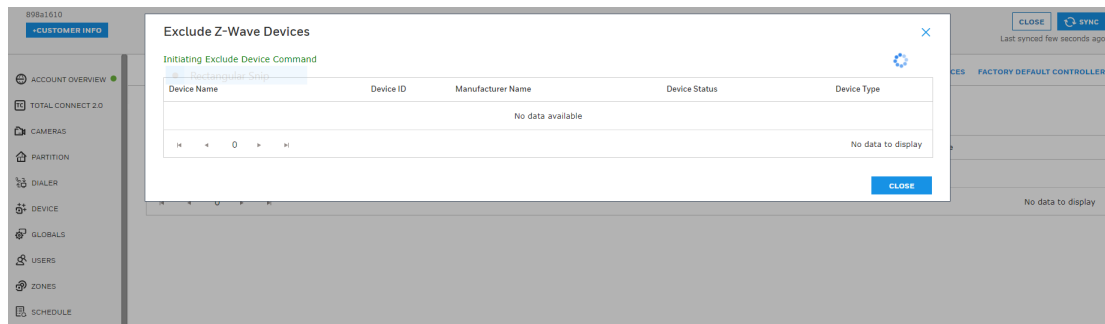
Exclusion:

For exclusion one Z-Wave device is in removing mode and the other one is in learn mode.

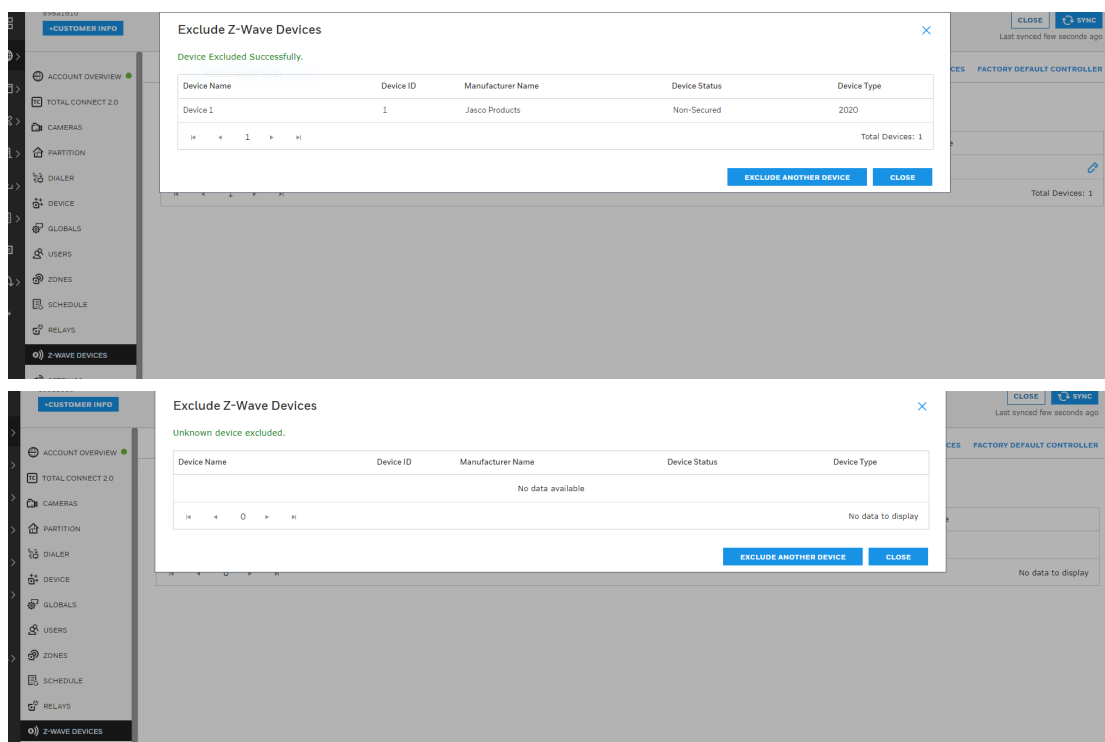
- To Exclude a Z-Wave device (Door lock, Switch, Dimmer...), click **EXCLUDE DEVICES** button.



2. The exclusion mode window appears while the system searches for Z-Wave Devices.

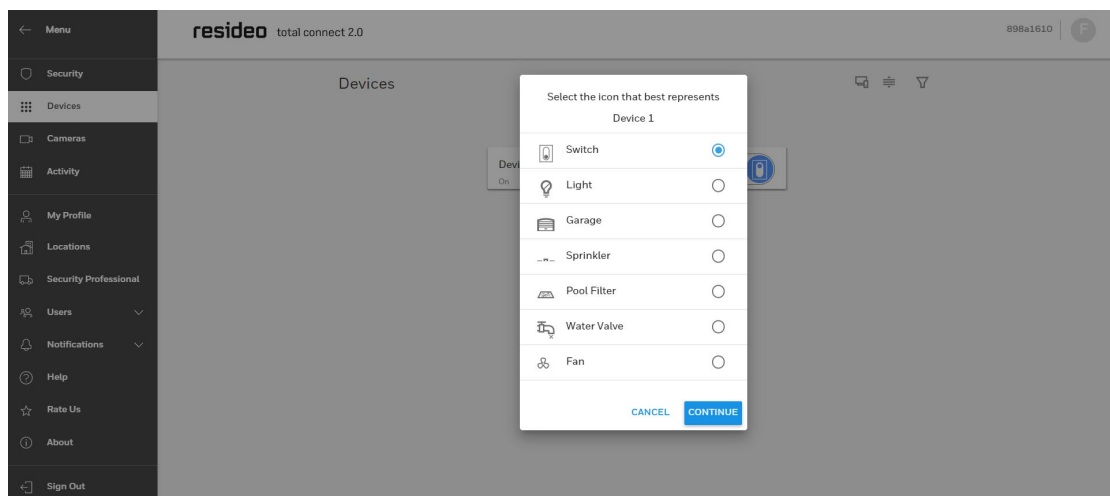
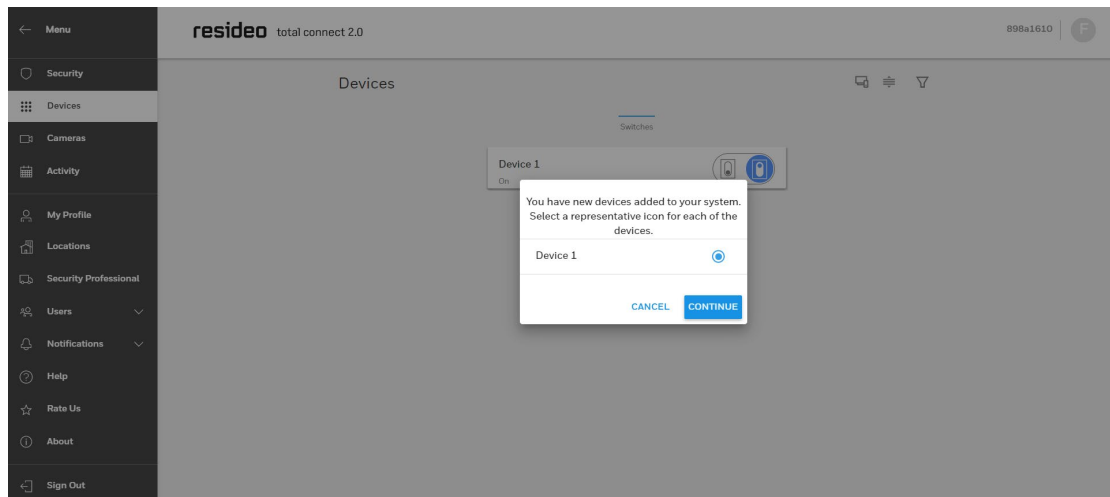


3. When the exclusion mode window displays a list of Z-Wave devices, press the Function button on the device that you want to exclude. Wait for the exclusion to end and the device information to display. Click **CLOSE**.

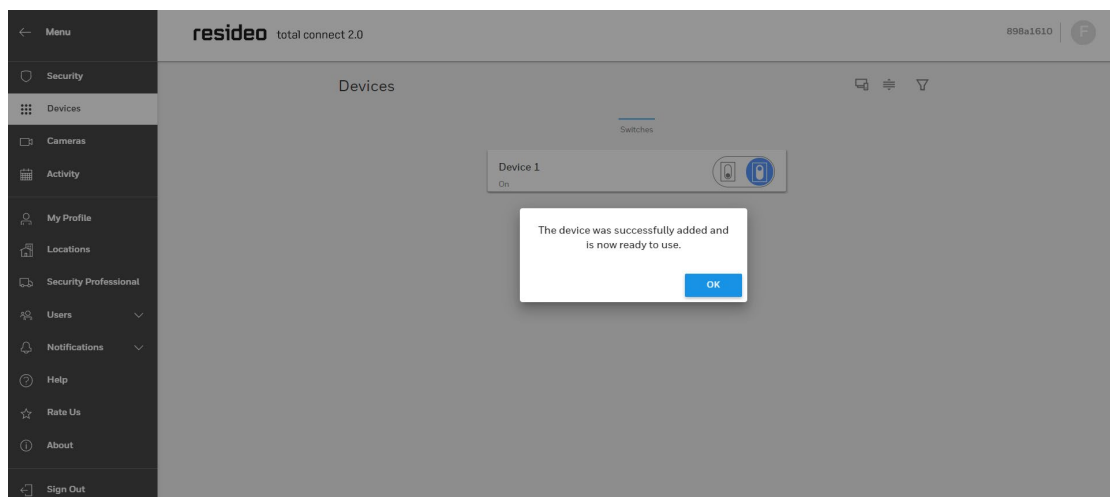


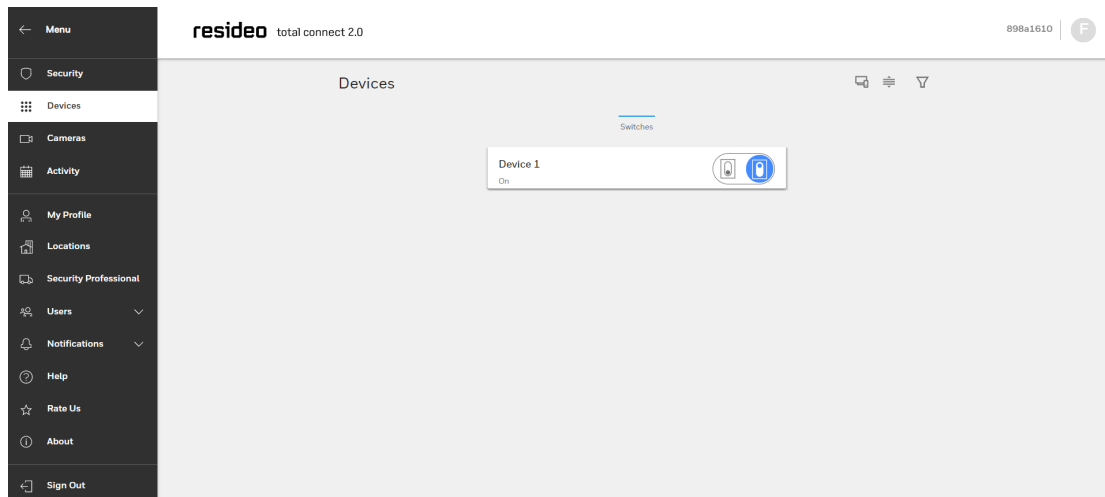
D.2 CloudAPI – TC2

Device information:



Click **CONTINUE**.



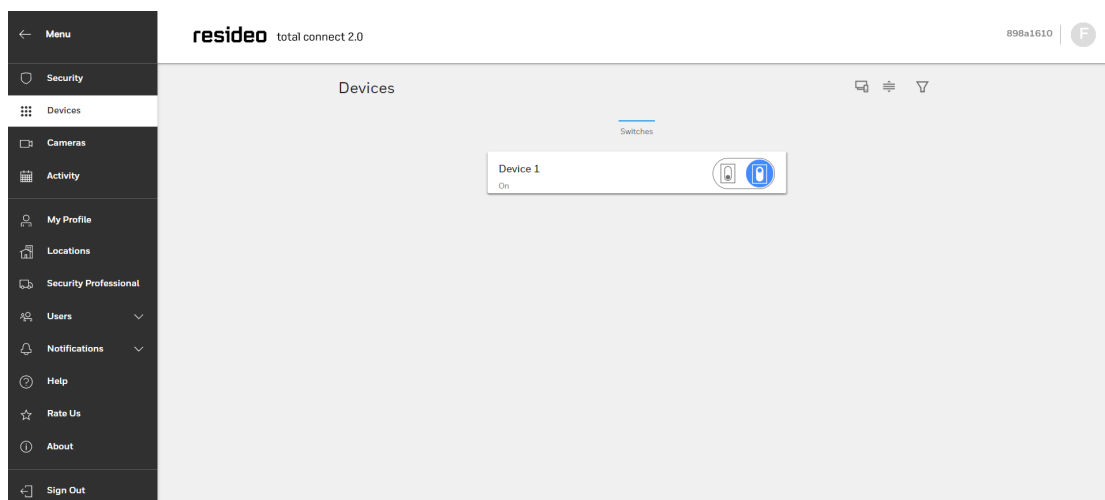


D.3 CloudAPI – Basic operation

Basic Z-Wave device operation:

Basic operation of Switch on the Cloud API AN360 interface

1. Device is already registered (Switch as an example)

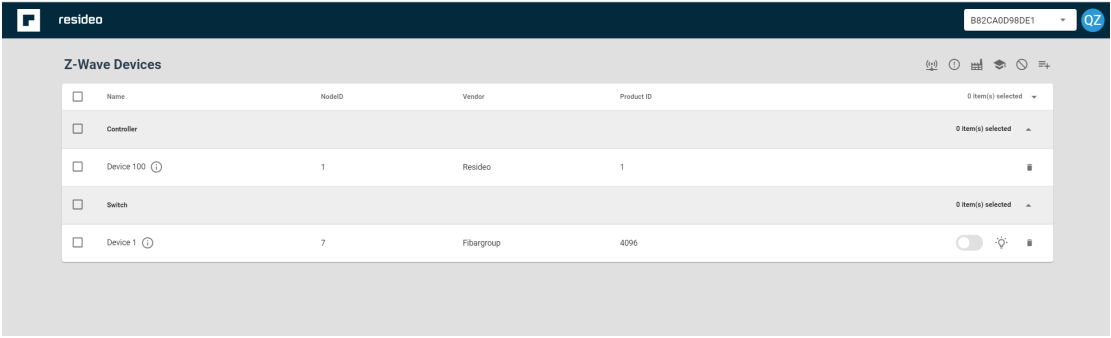


2. Click  button, control switch ON/OFF

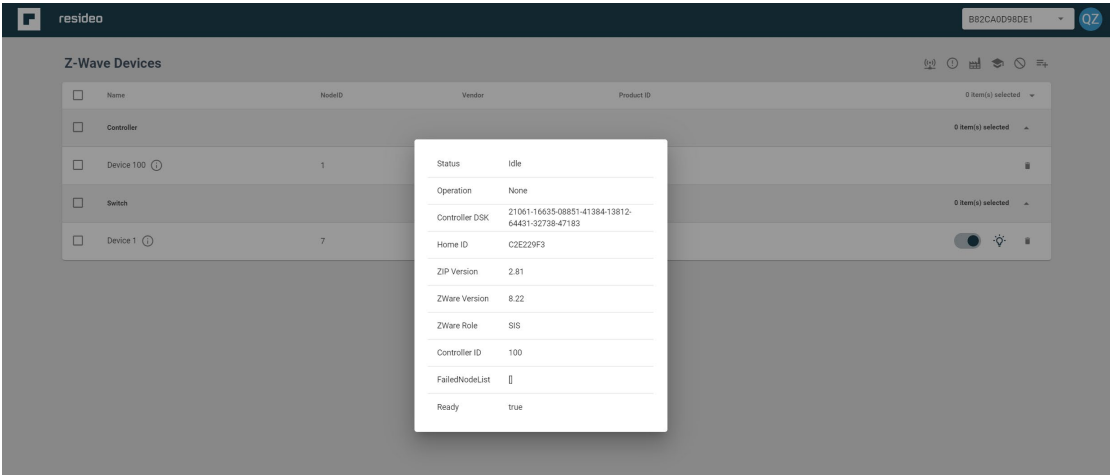
D.4 CloudAPI – Network information

Network information:

1. Click  button



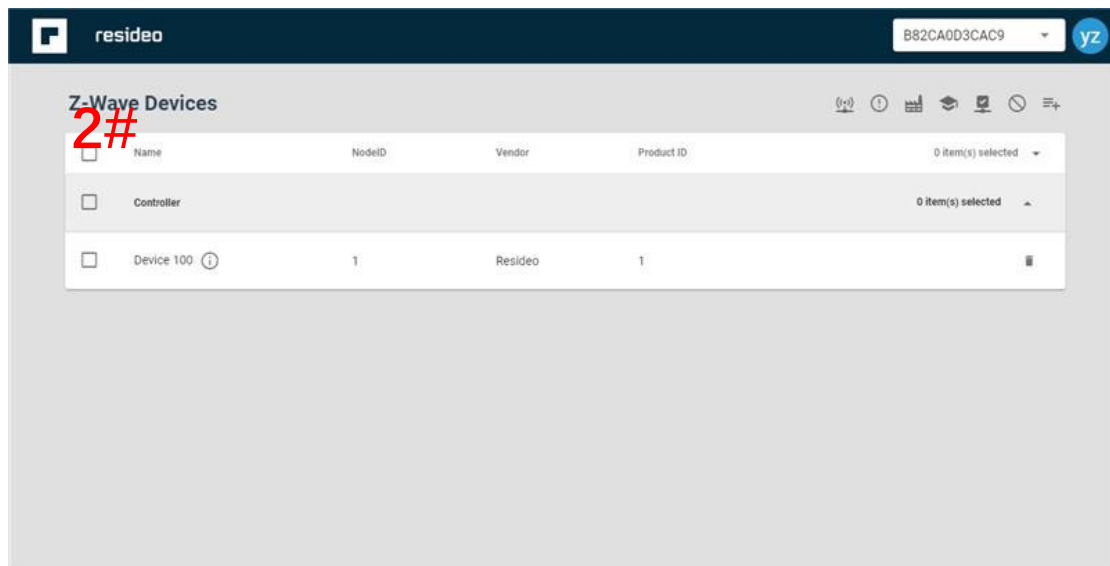
2. Display Z-Wave Network information



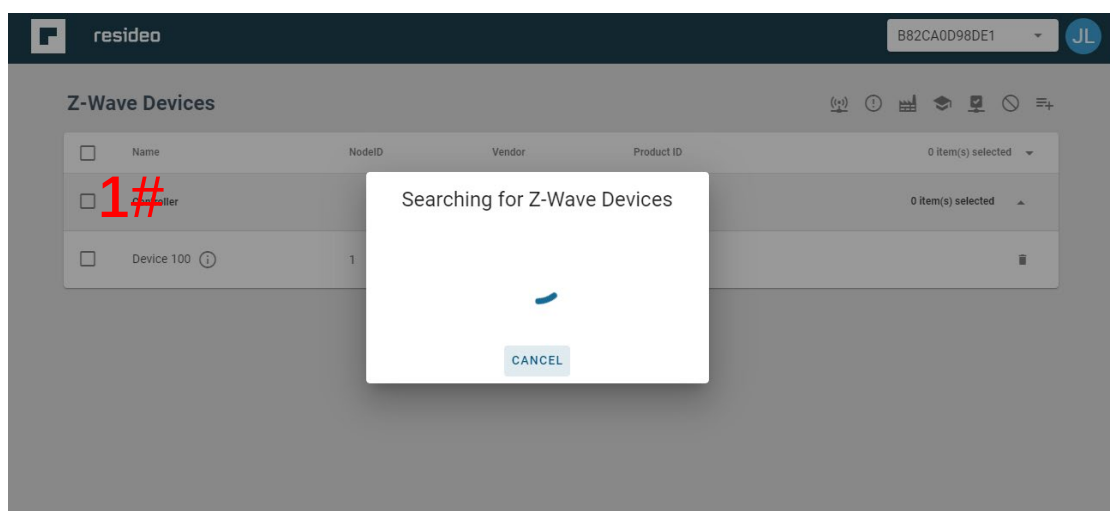
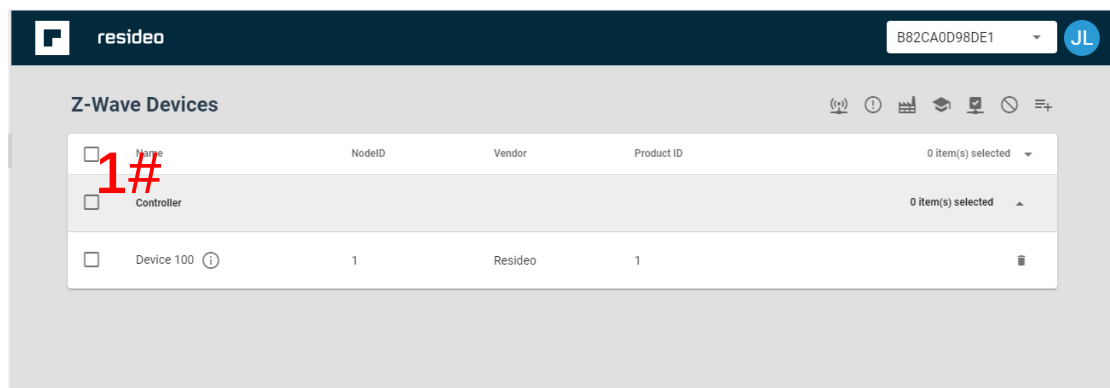
D.5 Controllers – Replication

Controller replication (Copy) is achieved through Inclusion and Set Learn Mode. Entering learn mode while in a network will trigger a replication if the primary controller is in add node mode. So, replication and Learn Mode are the same and you just need to do Learn Mode here.

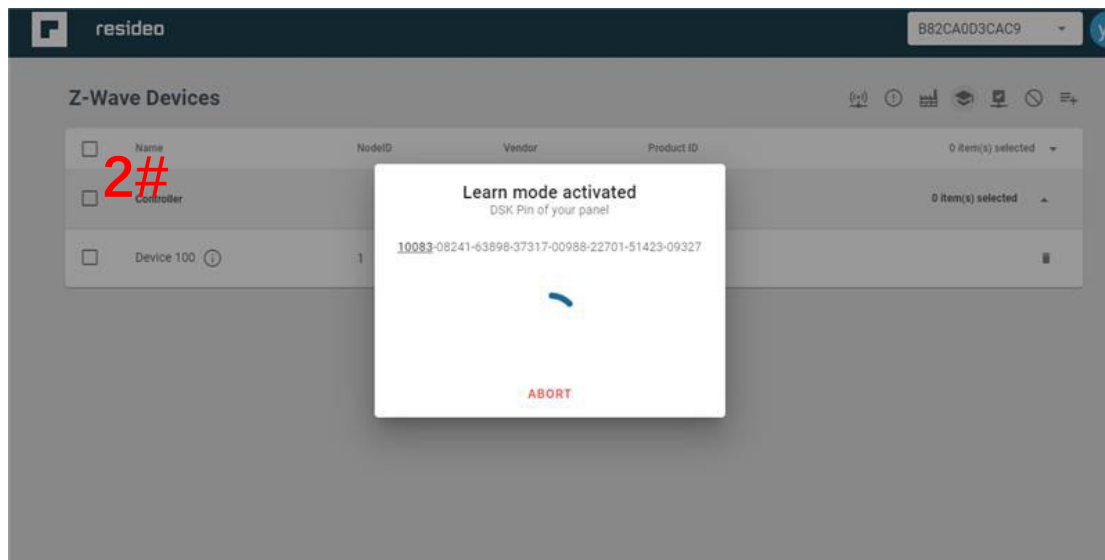
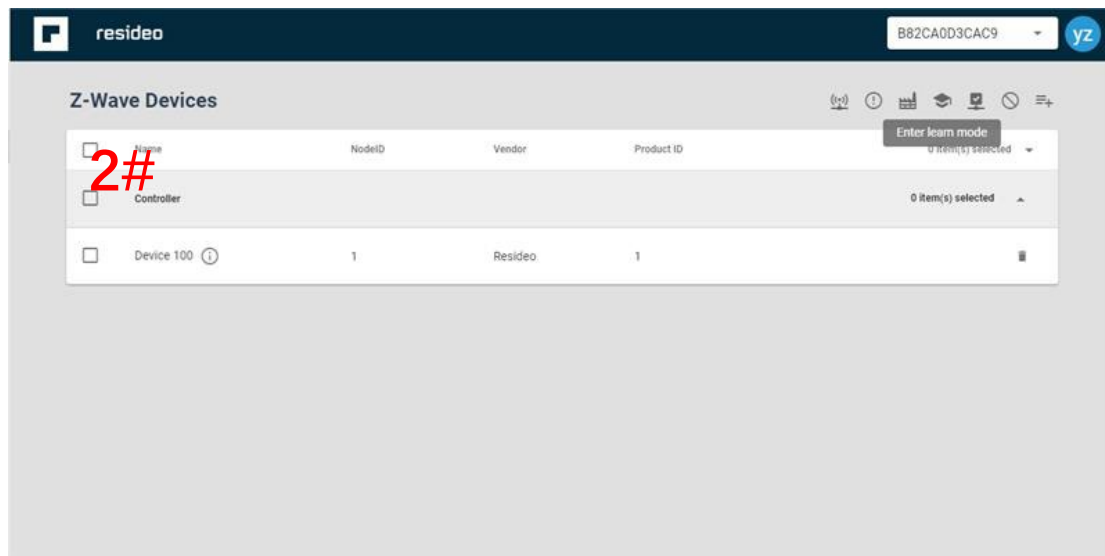
1. Prepare two mains powered Z-Wave DUTs and cloud API web shows as below
#2 DUT do factory reset first,



2. Click “Inclusion Mode” on the 1#

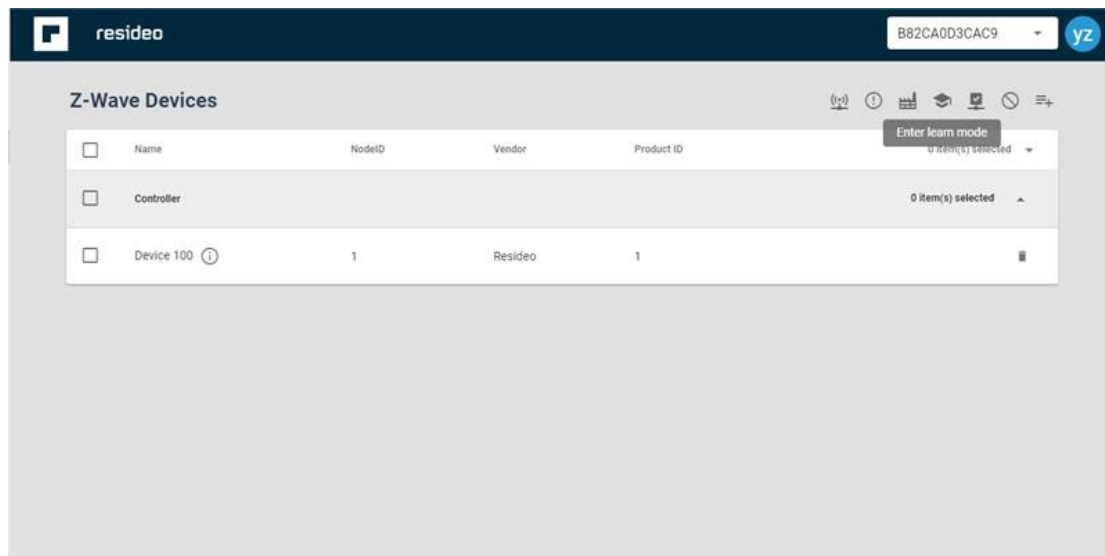


3. Click “Enter Learn Mode” on the 2#

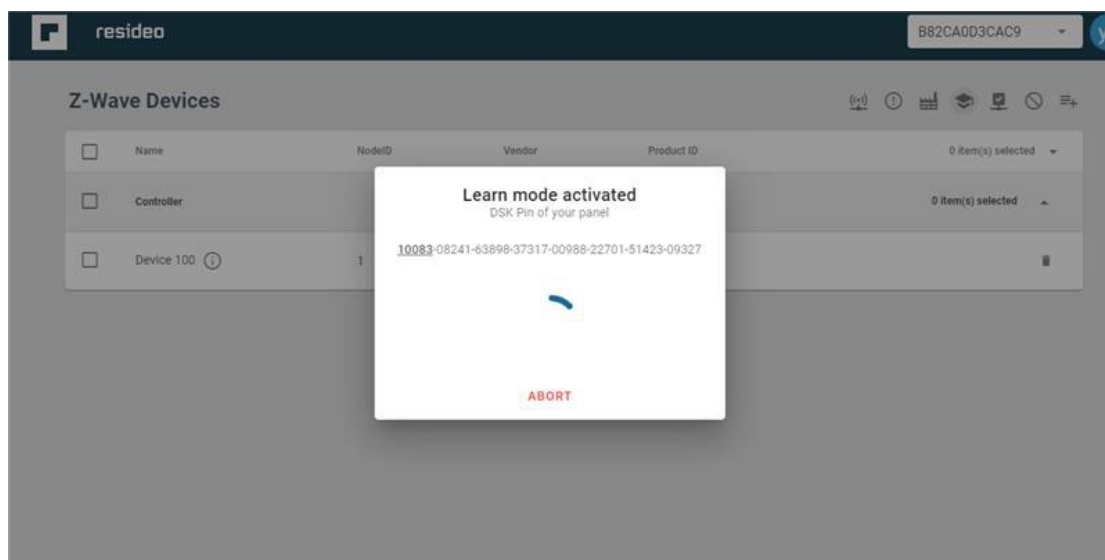


D.6 Controllers – Learn Mode

1. Click “Enter Learn Mode” on the web

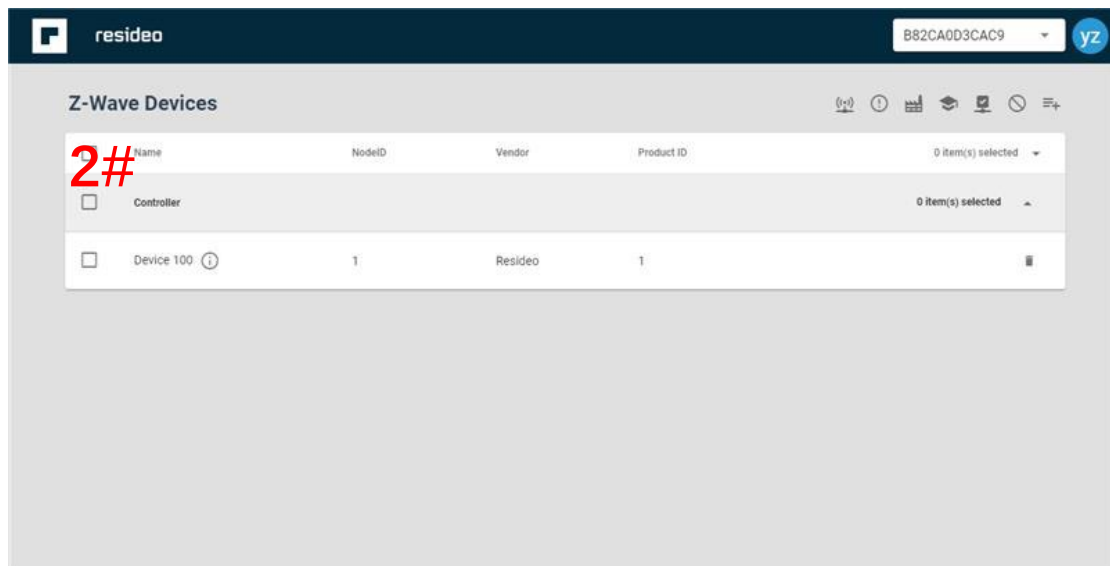


2. Then will show this DSK pin information

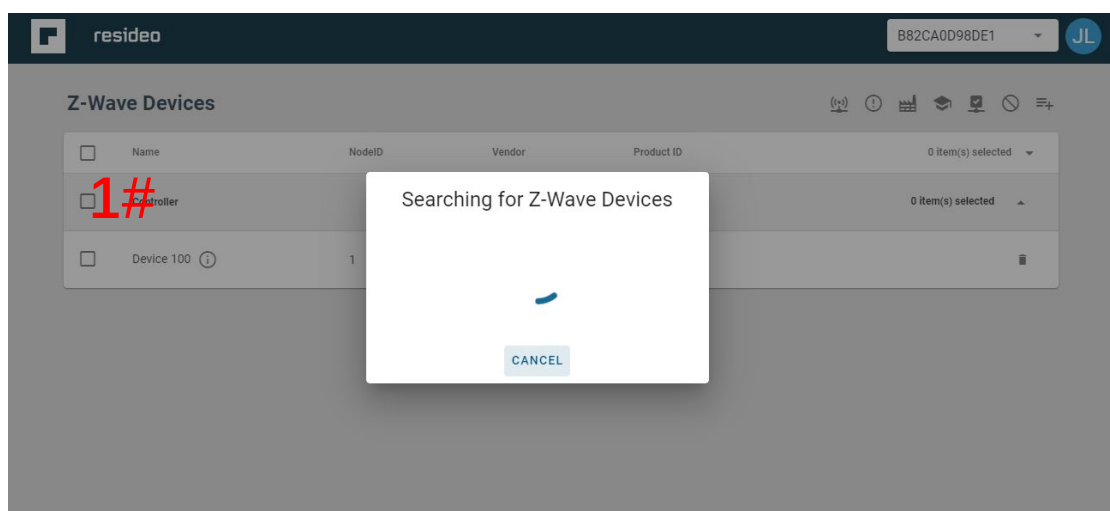
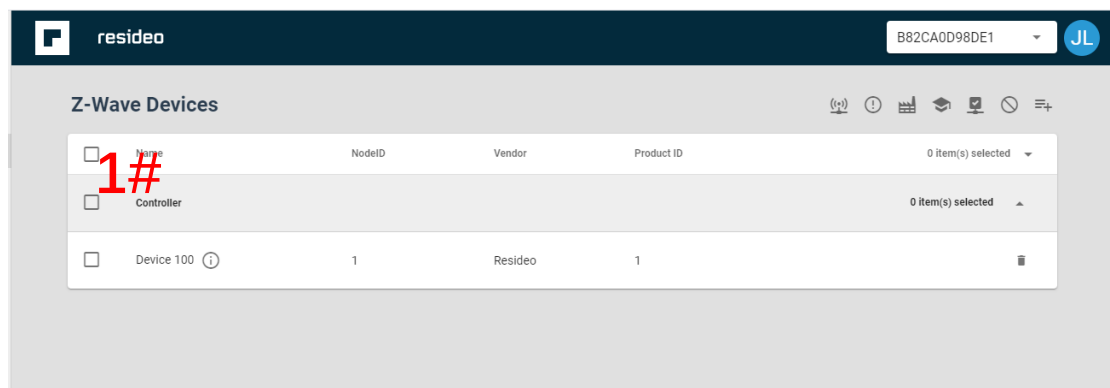


D.7 Controllers - Including the DUT

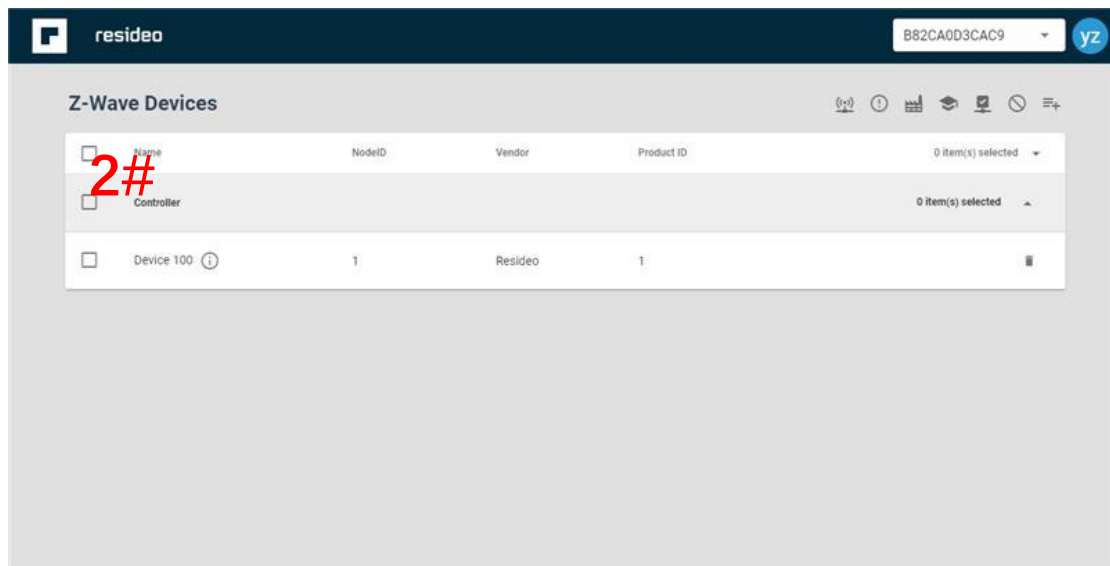
1. Prepare two mains powered Z-Wave DUTs, #2 DUT do factory reset first.



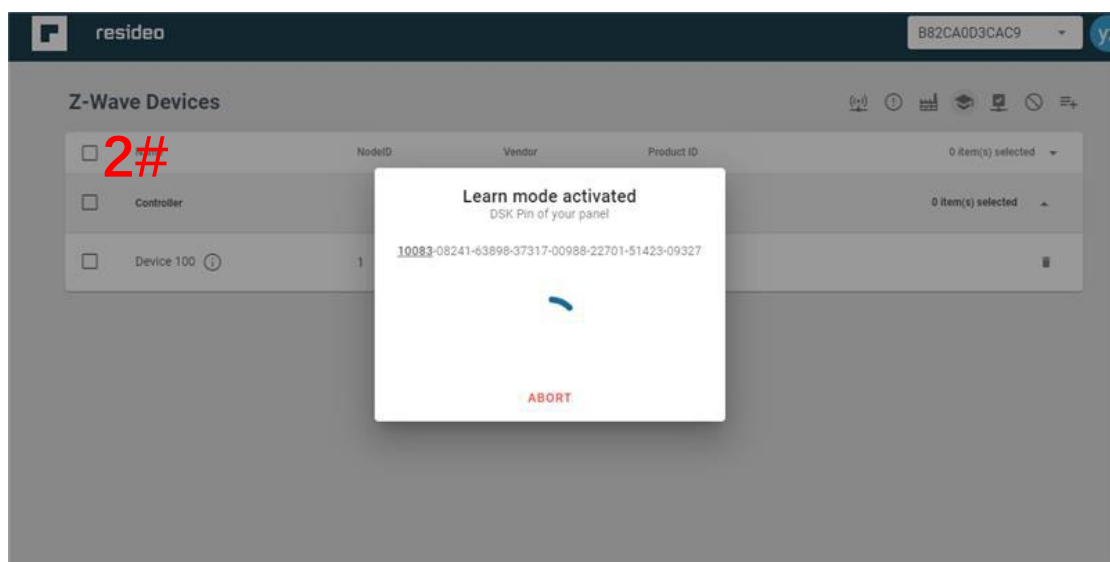
2. Click “Inclusion Mode” on the 1#



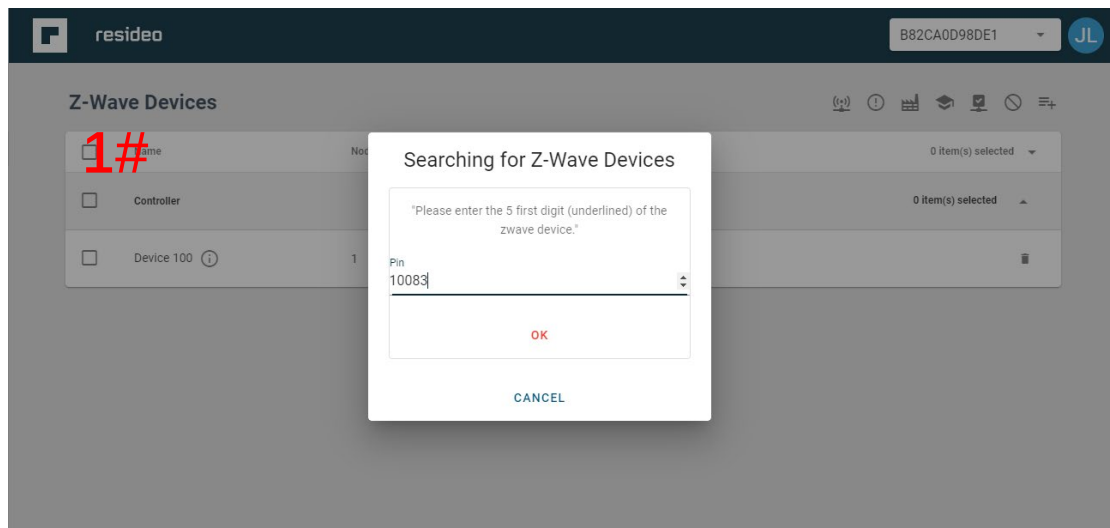
3. Click “Enter Learn Mode” on the 2#



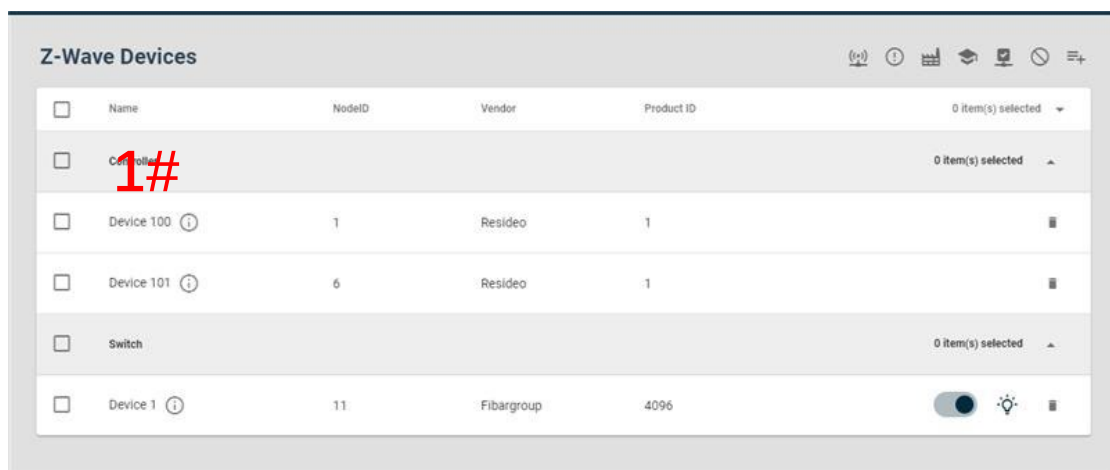
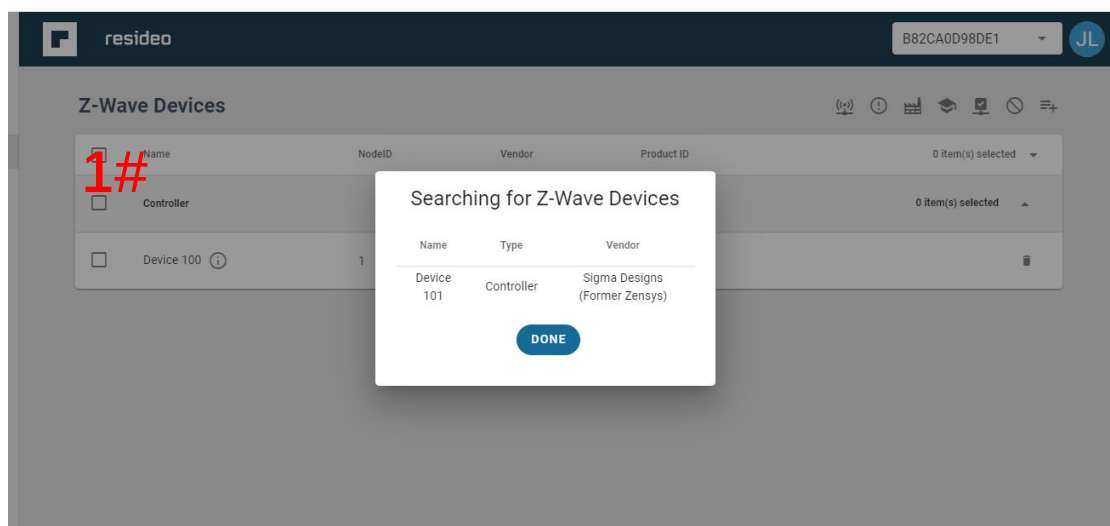
4. Then you will see DSK information below, remember the first five numbers underline.



5. Soon 1# web will pop out the DSK input box, fill the box with the first five numbers shows in 2#, and then click OK button



- Later will shows the 2#'s information, then click DONE button, refresh the 1# web, in the Z-Wave list, it will show the new included controller info, it means the operation of including the DUT successfully



D.8 Controllers - Basic Documentation

This product supports Basic Command and can give action if received a Basic Command.

D.9 Terminology

Z-Wave functionality	Documentation terminology	Example
Inclusion	Add	The process of adding a node to the Z-Wave network.
Exclusion	Remove	The process of removing a node from the Z-Wave network.
Replication	Copy	The process of copying network information from one controller to another.

D.10 Devices from multiple manufacturers in one network

This product can be operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers. All non-battery-operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

D.11 Documentation for Association CC

The association group available in our product is described as follows.

Group ID	Maximum Nodes	Description
1	1	Z-Wave Plus™ Lifeline

D.12 Documentation related to BASIC commands

The Basic Command Class mapping is listed below. Basic set and basic get commands are described separately.

Basic Set Command Mapping	Parameter		Value
KEX Set	Selected KEX Scheme		02
	Selected ECDH Profile		01
	Granted Keys	Unauthenticated	01
		Authenticated	02
		Access	04
Association Set	S0		80
	Grouping Identifier		01
	Node ID		1

Basic Get Command Mapping	Parameter		Value
Z-Wave Plus Info Get	None		None
KEX Get	None		None
S2 Network Key Get	Requested Key	Unauthenticated	00
		Authenticated	01
		Access	02
		S0	07
S2 Commands Supported Get	None		None
S2 Nounce Get	Sequence Number		Random
Security Nounce Get	None		None
Security Commands Supported Get	None		None
DSK Get	Seq No		00
	Add Mode		false
PowerLevel Get	None		None
PowerLevel Test Node Get	None		None
Manufacturer Specific Get	None		None
Version Command Class Get	None		None
Version Get	None		None

Version Capabilities Get	None	None
Version Z-Wave Software Get	None	None
Association Get	Grouping Identifier	01
Association Groupings Get	None	None
Association Specific Group Get	None	None
Association Group Name Get	Grouping Identifier	01
Association Group Info Get	List Mode	true
	Refresh Cache	false
	Grouping Identifier	01
Association Group Command List Get	Allow Cache	true
	Grouping Identifier	01
Device Specific Get	None	None

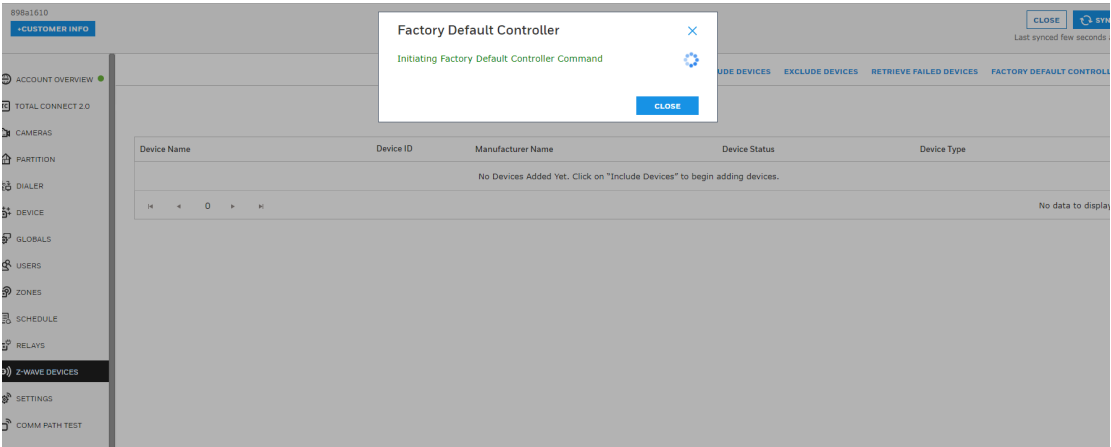
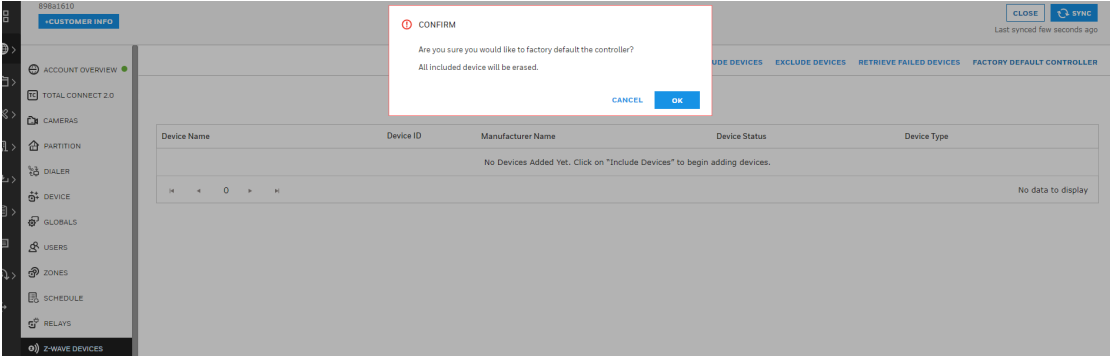
D.13 Documentation related to BASIC commands

The following basic commands are used for our product to control some devices.

Object	Control Command	Value	Behavior of device
Door Lock (Entry Control Keypad)	Basic Set	0xFF	ignore any received basic commands
		0x00	
On/Off Switch	Switch Binary Set	0xFF	Turn on
		0x00	Turn off
Power Strip	Switch Binary Set	0xFF	Turn on
		0x00	Turn off
	Switch Multilevel Set	0xFF	Turn on
		0x00	Turn off
Fan Switch	Switch Multilevel Set	0xFF	Turn on
		0x00	Turn off
Light Dimmer Switch	Switch Multilevel Set	0xFF	Turn on
		0x00	Turn off
Thermostat, HVAC	Thermostat Mode Set	0xFF	Comfort Mode
		0x00	Energy Save Mode

D.14 Documentation for Factory Default Reset

Press the button Factory Default Controller – All included Devices will be erased.



If this controller is the primary controller for your network, resetting it will result in the nodes in your network being orphaned and it will be necessary after the reset to exclude and re-include all of the nodes in the network. If this controller is being used as a secondary controller in the network, use this procedure to reset this controller only in the event that the network primary controller is missing or otherwise inoperable.

D.19 Documentation for S2 Security CC

Command Class	Version	Required Security Class
Z-Wave Info	2	None

Transport Service	2	None
CRC-16 Encapsulation	1	None
Application Status	1	None
Security 2	1	None
Security 0	1	None
Inclusion Controller	1	None
Supervision	1	None
Multi Command	1	None
Network Management inclusion	3	Access Control
Network management basic	2	Access Control
Network Management Proxy	2	Access Control
Association Group Information	3	Access Control
Device Reset Locally	1	Access Control
Network Management Installation Maintenance	2	Access Control
Manufacturer Specific	2	Access Control
Powerlevel	1	Access Control
Node Provisioning	1	Access Control
Firmware Update Meta Data	5	Access Control
Association	2	Access Control
Version	3	Access Control
Basic	2	Access Control

D.21 Appendix

D.21.1 Functionality activation

Documentation about how to activate any functionality available in the device related to Z-Wave behavior is listed below.



800-25178_QIG_T
UXEDOW_4-26-15



800-25175_QUG_
TUXEDOW_4-26-15

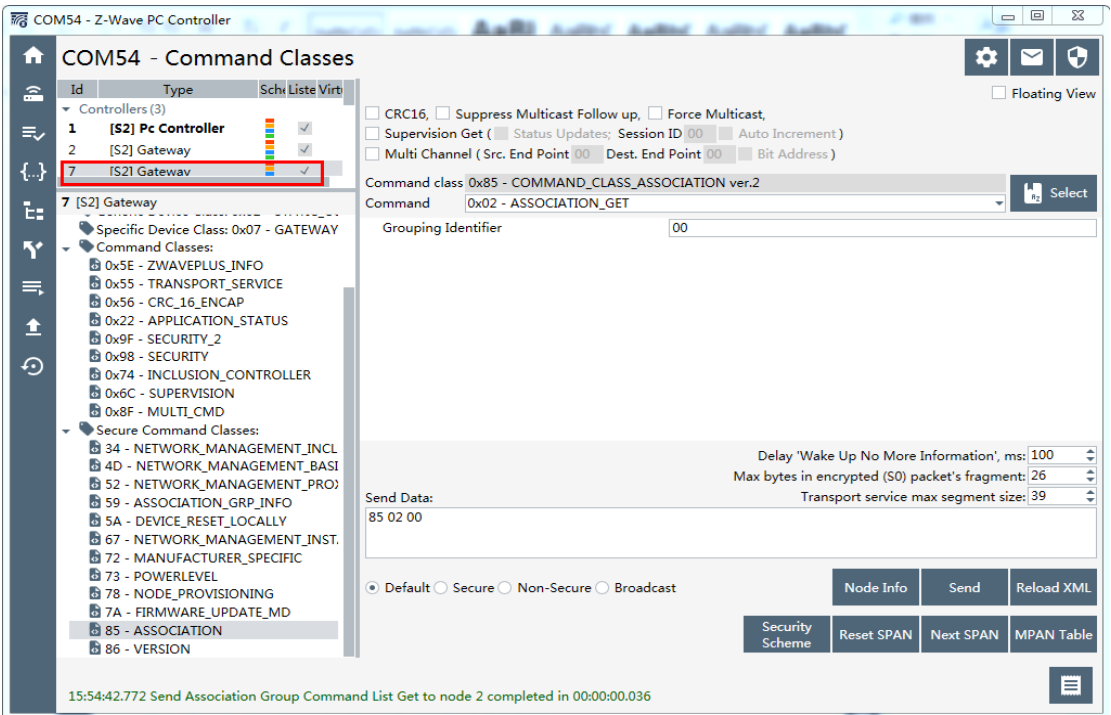
D.21.2

None

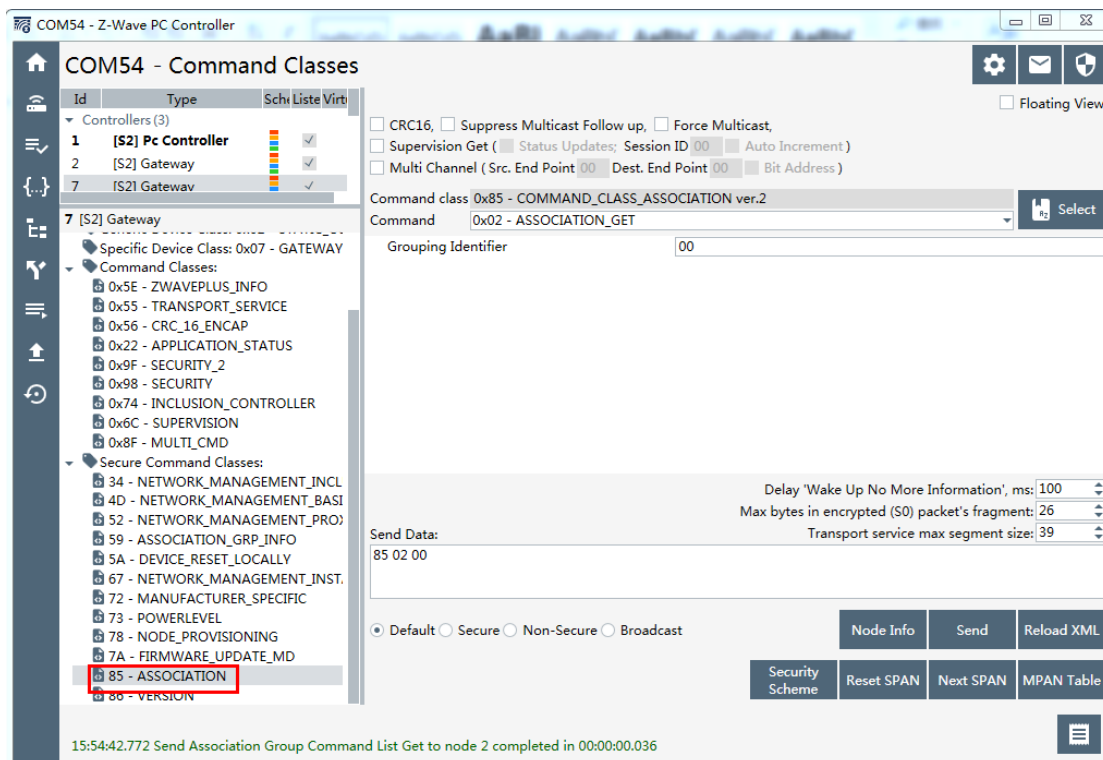
D.21.3 Controlled Commands

About how to send any controlled command from the controller, Z-Wave PC controller tool is preferred.

1. Double click to select the controlled device. The selected device appears in grey highlight.



2. Double click one command of command classes or secure command classes to choose such as association



3. Choose the command in command list and then click **Send** button.

