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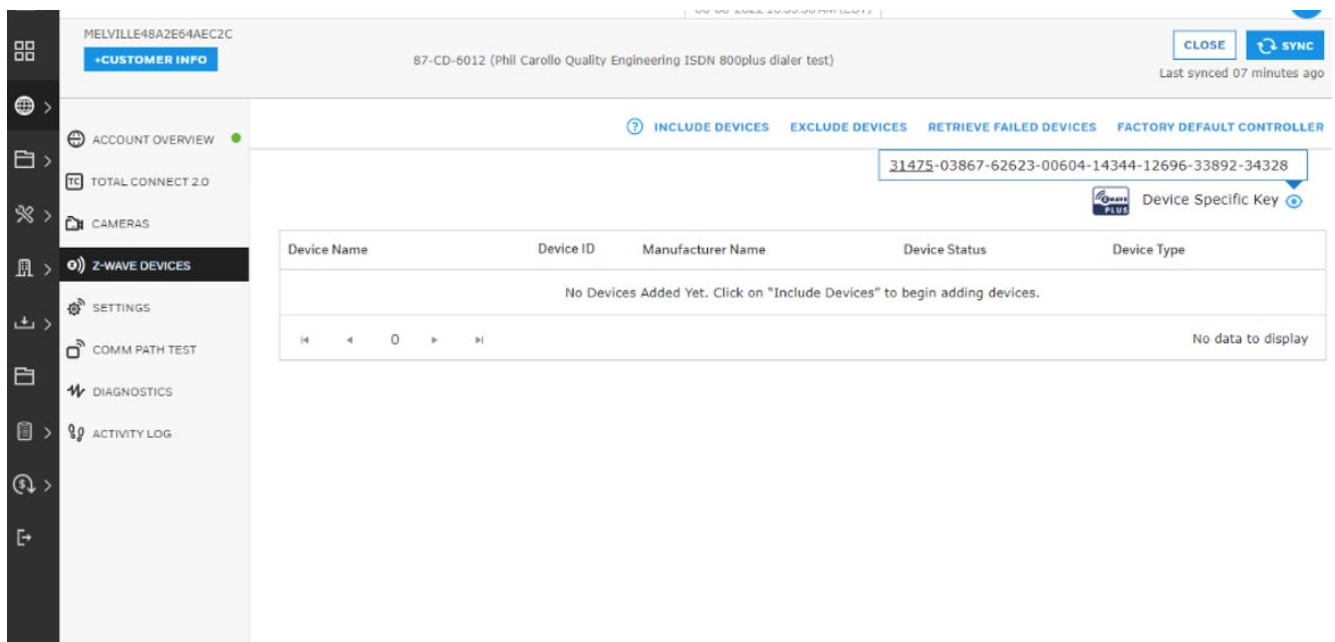
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This device is a security enabled Z-Wave Plus® product that can use encrypted Z-Wave Plus messages to communicate to other security enabled Z-Wave Plus products.

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.

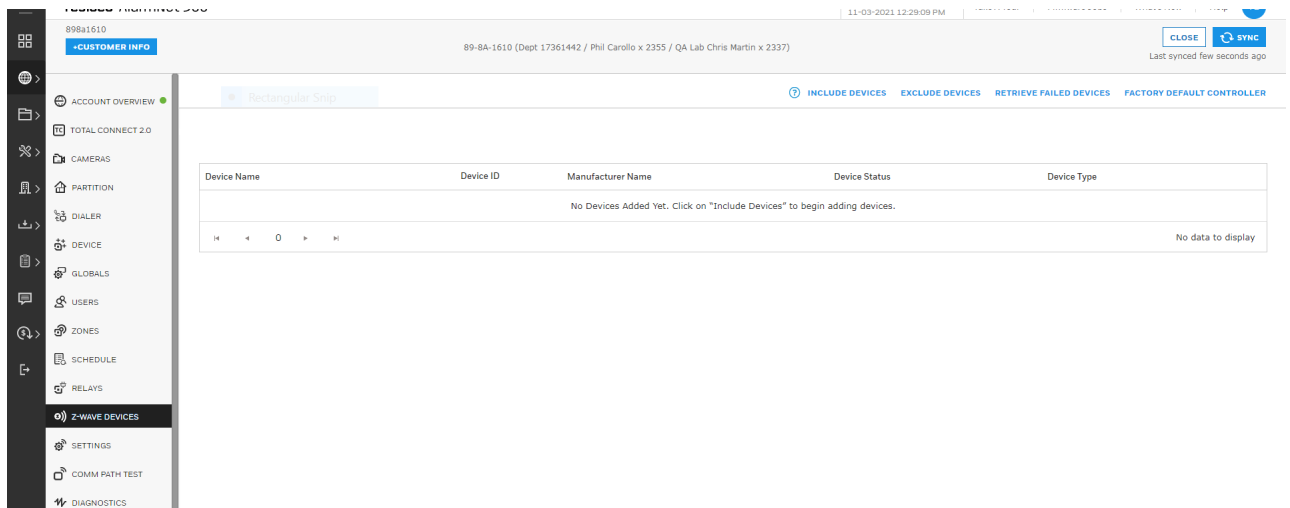


The screenshot displays the Z-Wave Plus interface for a device with ID MELVILLE48A2E64AEC2C. The top bar shows the device name and a status of 87-CD-6012 (Phil Carollo Quality Engineering ISDN 800plus dialer test). A 'CUSTOMER INFO' button is visible. The main content area features a sidebar with navigation options: ACCOUNT OVERVIEW, TOTAL CONNECT 2.0, CAMERAS, Z-WAVE DEVICES (selected), SETTINGS, COMM PATH TEST, DIAGNOSTICS, and ACTIVITY LOG. The Z-WAVE DEVICES section includes buttons for INCLUDE DEVICES, EXCLUDE DEVICES, RETRIEVE FAILED DEVICES, and FACTORY DEFAULT CONTROLLER. A Device Specific Key (DSK) is displayed as 31475-03867-62623-00604-14344-12696-33892-34328. Below the DSK, a table lists device information with columns: Device Name, Device ID, Manufacturer Name, Device Status, and Device Type. The table currently shows 'No Devices Added Yet. Click on "Include Devices" to begin adding devices.' and 'No data to display'.

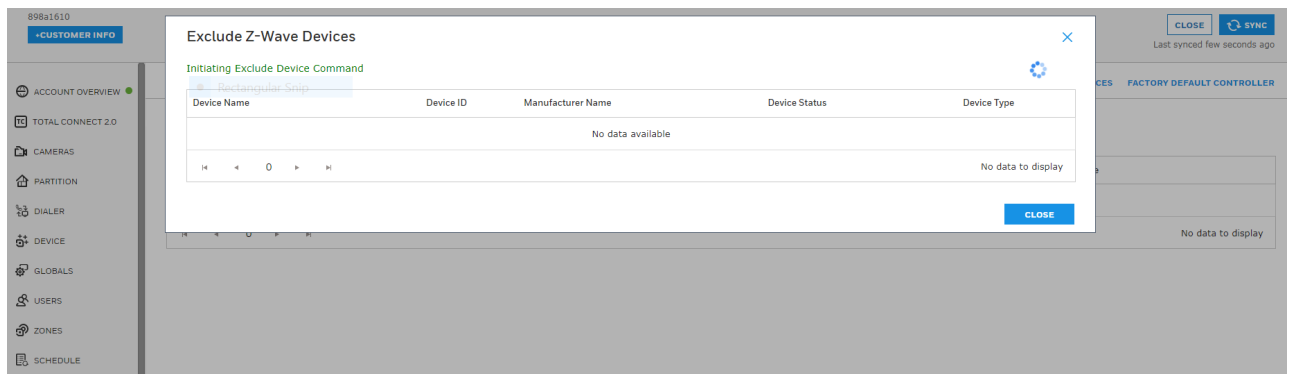
Exclusion

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

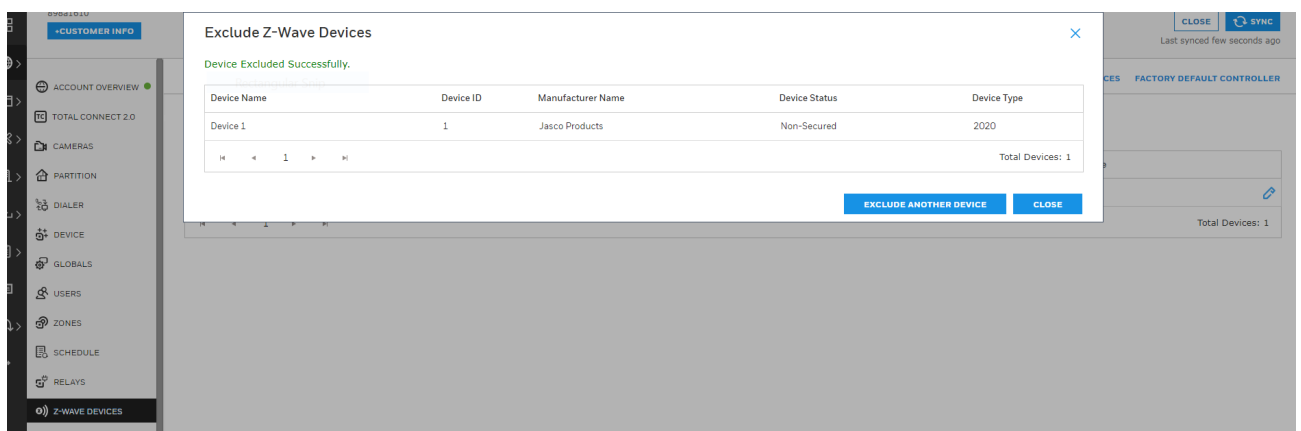
1. To Exclude a Z-Wave device (Door lock, Switch, Dimmer...), click the **EXCLUDE DEVICES** button.

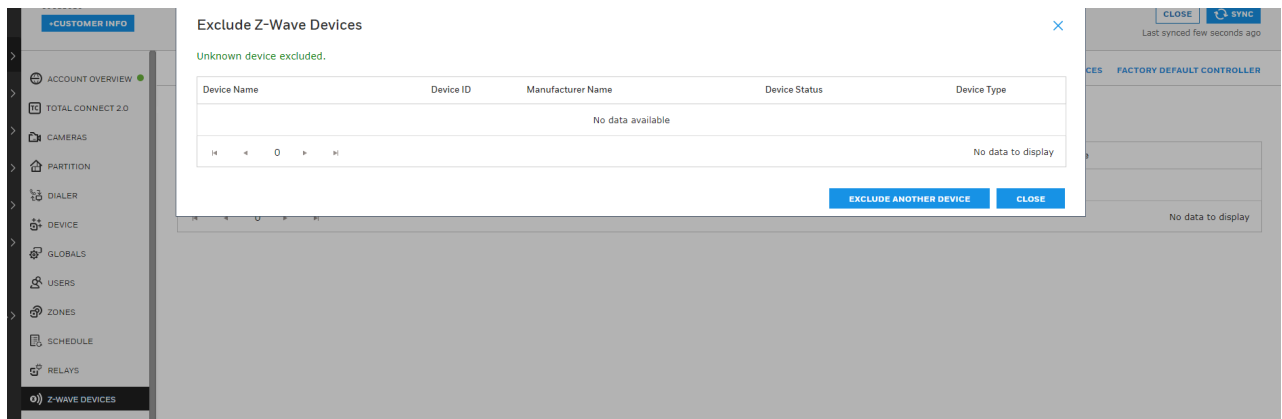


2. The exclusion mode window appears while the system searches for Z-Wave Devices.



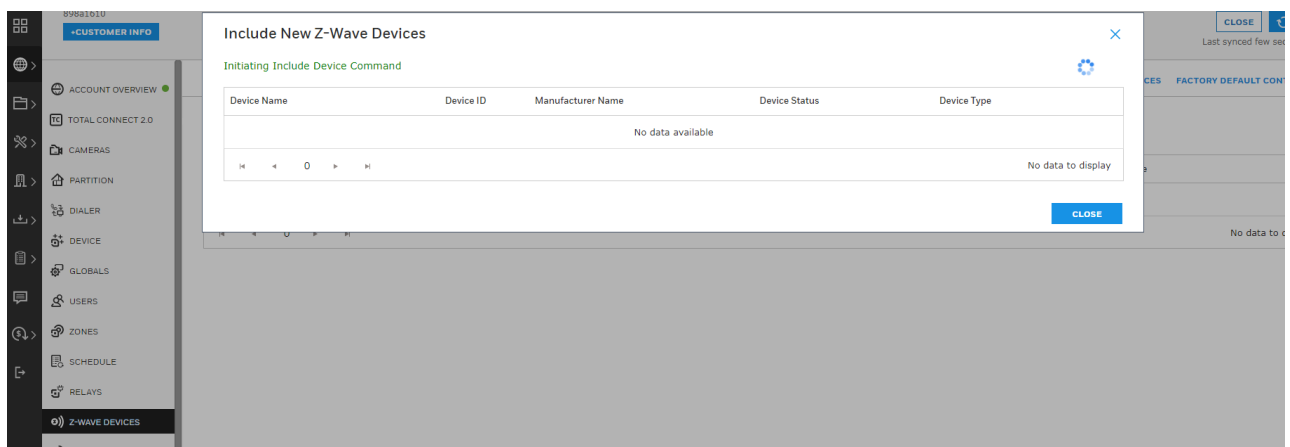
3. When the exclusion mode window displays a list of Z-Wave devices, press the Function button on the device that you want to exclude. Wait for the exclusion to end and the device information to display. Click **CLOSE**.



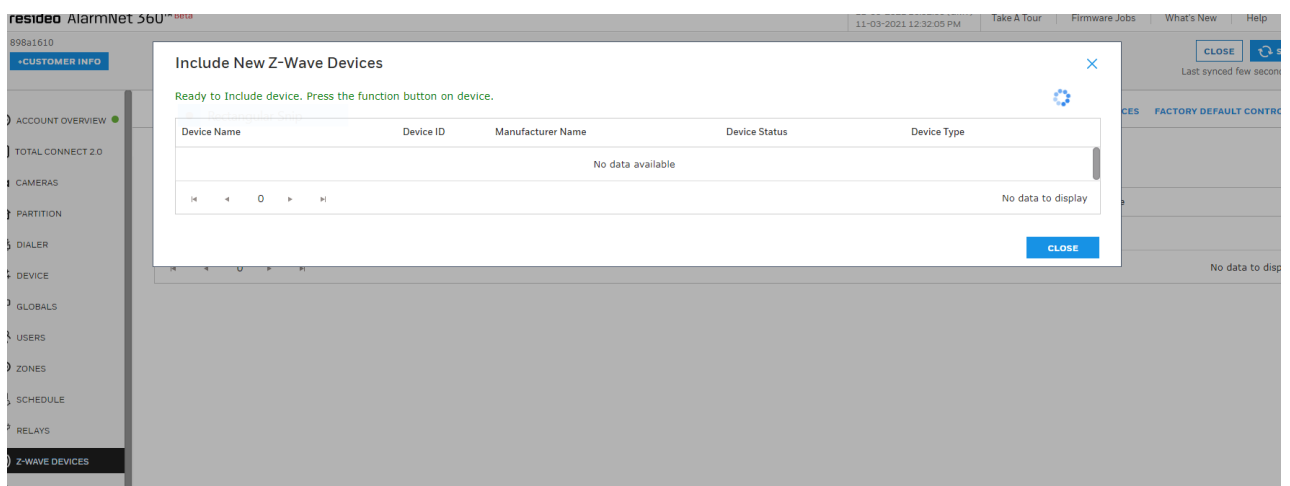


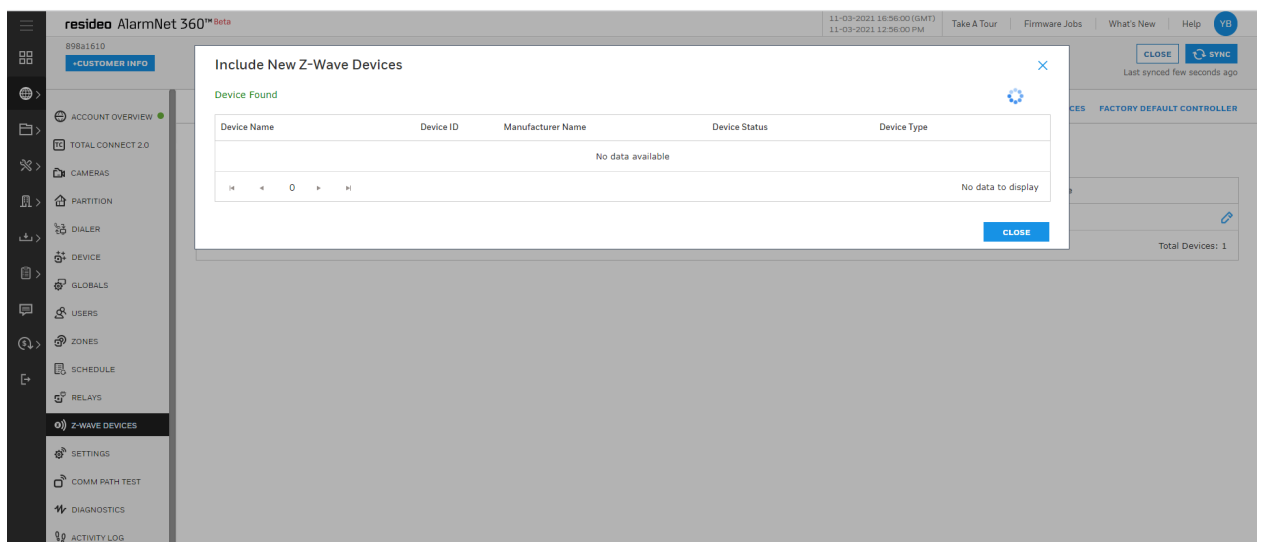
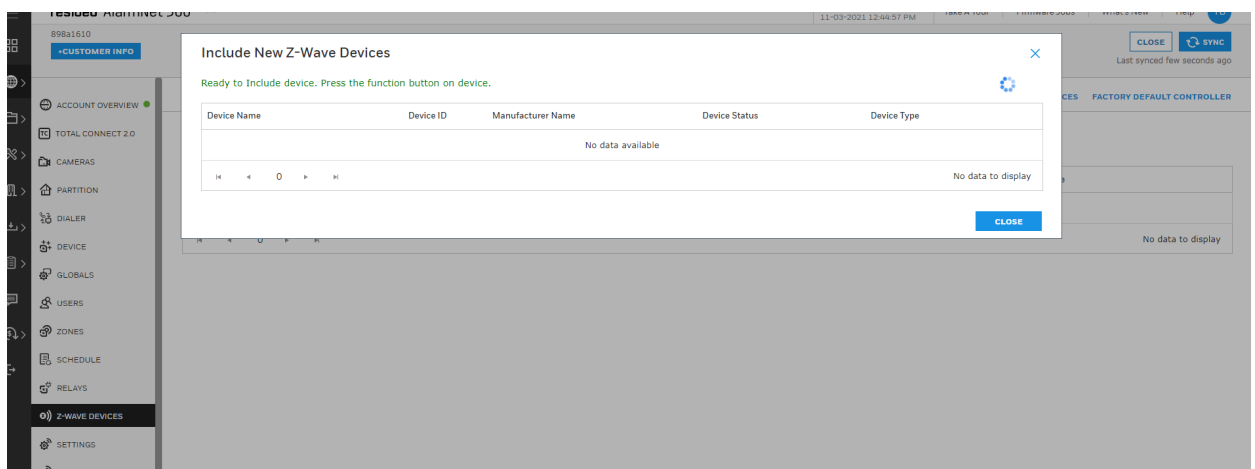
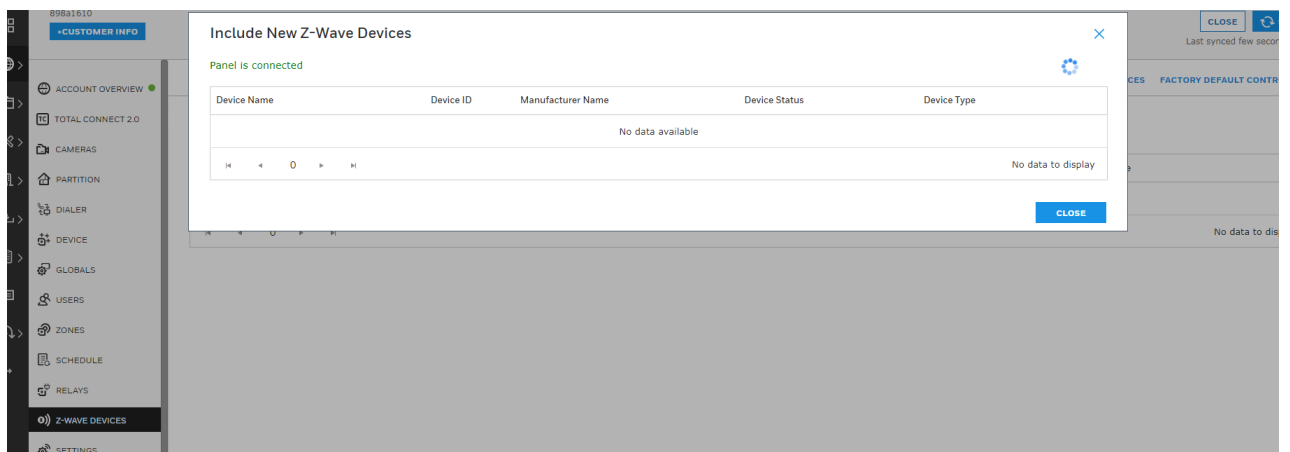
Inclusion

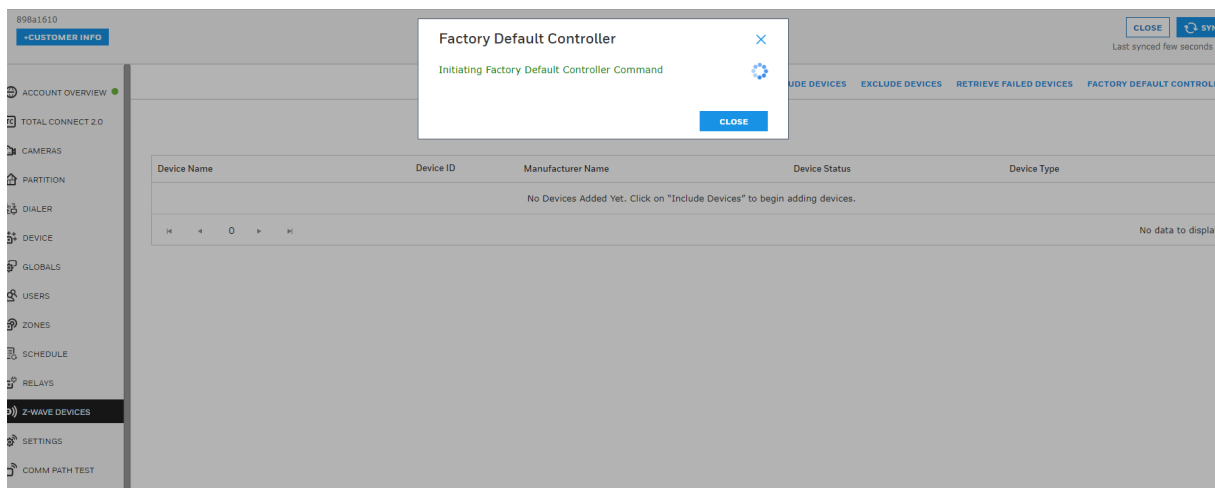
1. To Include a Z-Wave device (Door lock, Switch, Dimmer...), click the **INCLUDE DEVICES** button.



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**.





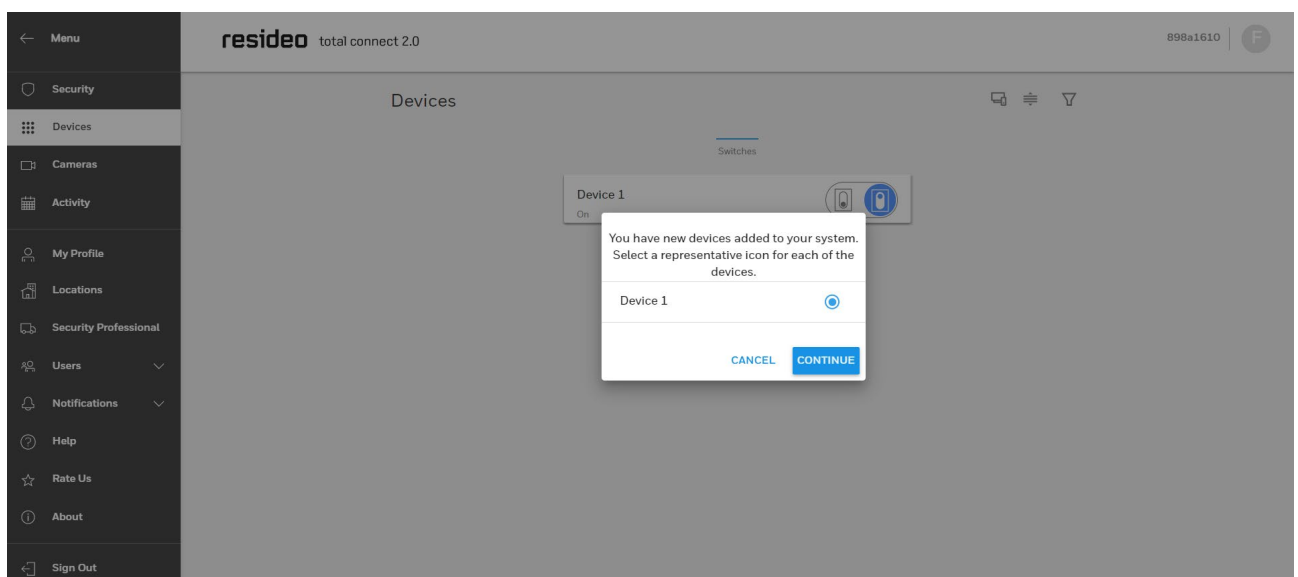


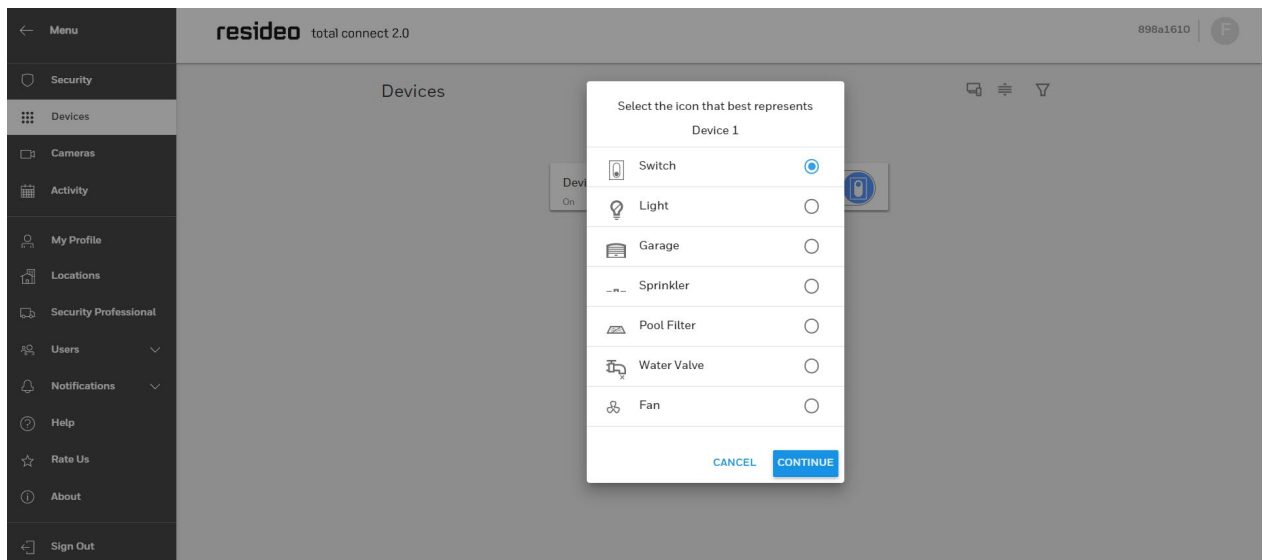
If this controller is the primary controller for your network, resetting it will result in the nodes in your network being orphaned and it will be necessary after the reset to exclude and re-include all the nodes in the network.

If this controller is being used as a secondary controller in the network, use this procedure to reset this controller only in case the network primary controller is missing or otherwise inoperable.

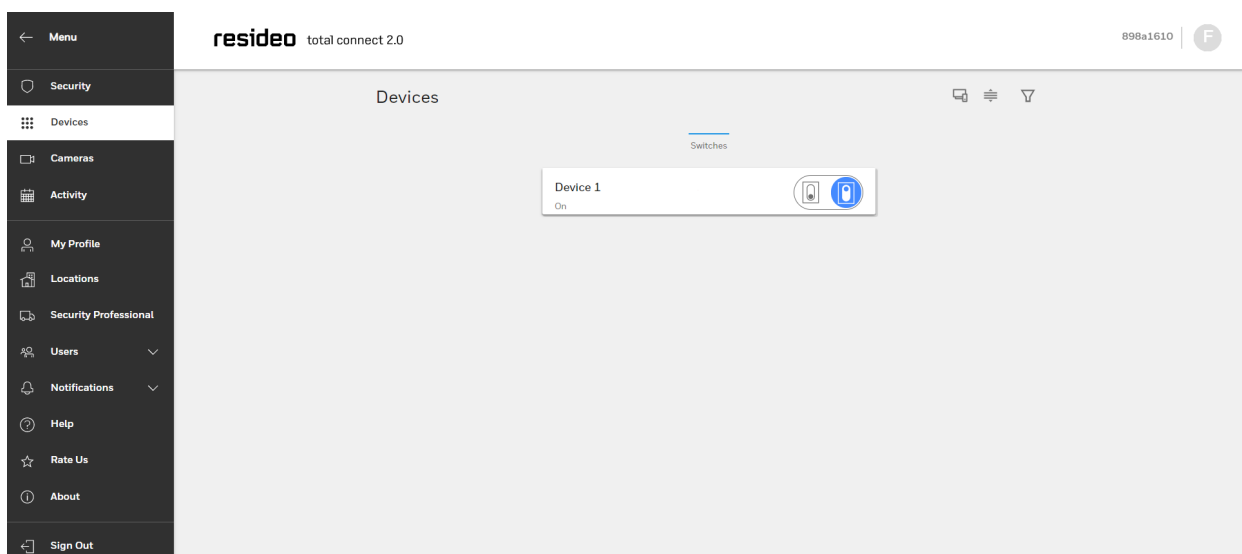
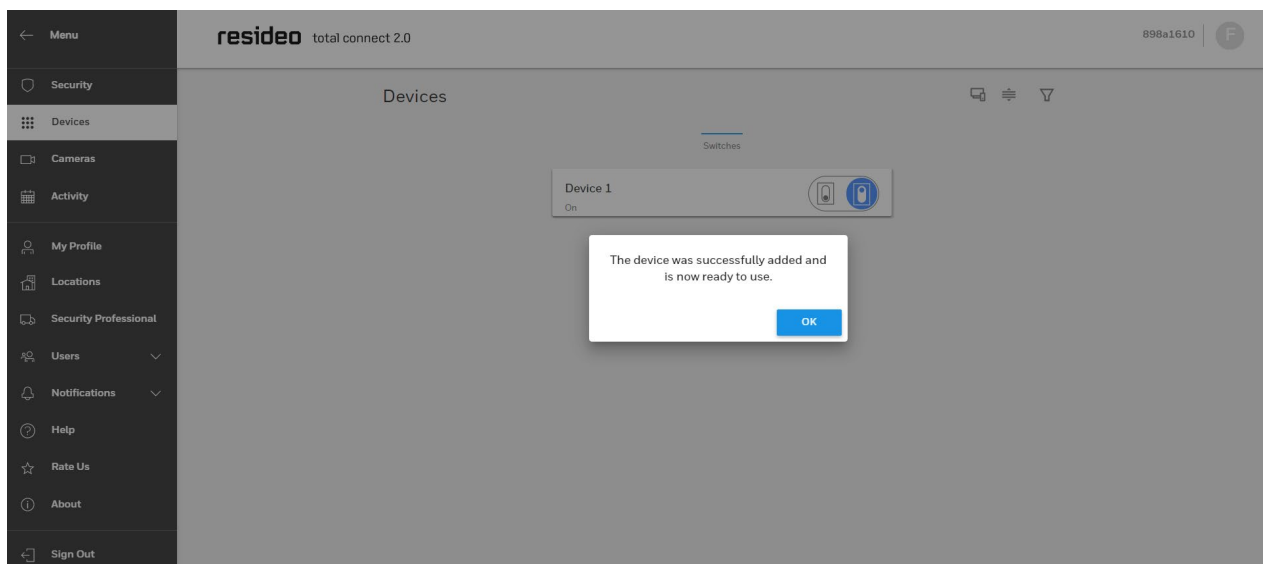
D.2 CloudAPI – TC2

Device information





Click **CONTINUE**.

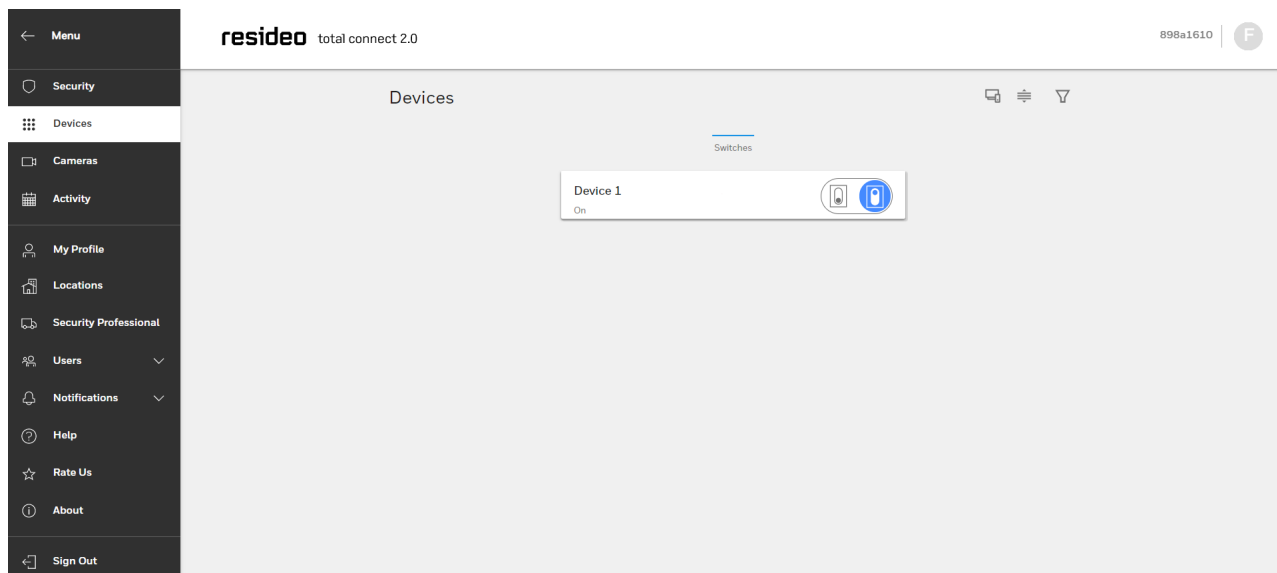


D.3 CloudAPI – Basic operation

Basic Z-Wave device operation:

Basic operation of Switch on the Cloud API interface

1. Device is already registered Switch as an example



2. Click  button, control switch ON/OFF

D.4 Controllers - Basic Documentation

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

D.5 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.6 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.7 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.8 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.9 BASIC commands used

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.10 Documentation for S2 Security CC

Command Class	Version	Required Security Class
Z-Wave Plus 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

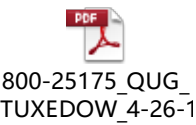
D.11 Appendix

D.11.1 functionality activation

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



Tuxedo Quick Installation Guide (QIG) 800-25178

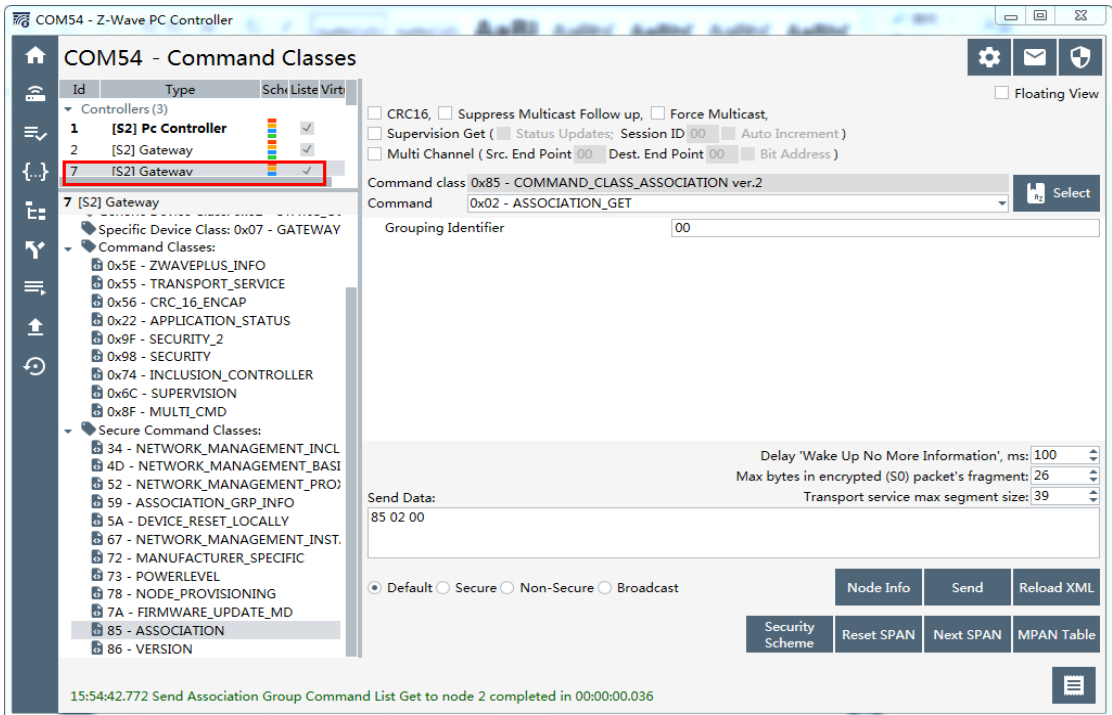


Tuxedo Quick User Guide (QUG) 800-25175

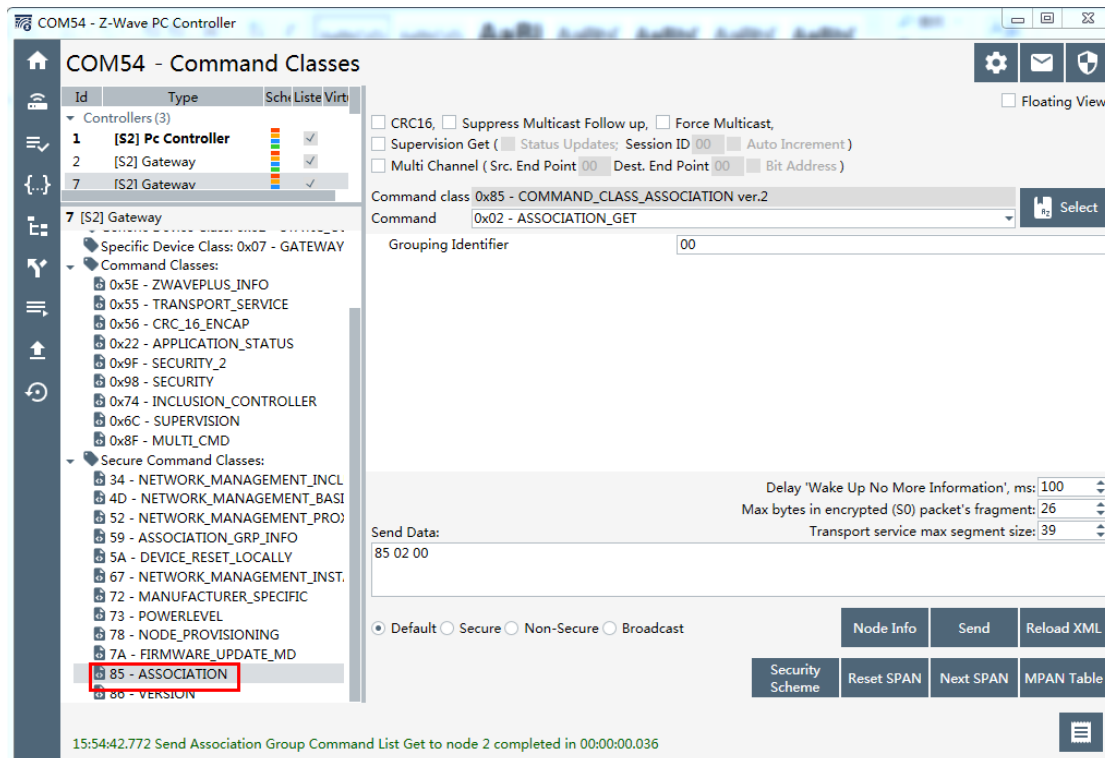
D.11.2 Controlled commands

Regarding how to gr any controlled commands 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.



- Double click one command of the command classes or secure command classes to select a command (ex. such as association).



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

