



Instruction

IFTTT Z-Wave Channel User Guide

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REVISION RECORD

Doc. Rev	Date	By	Pages affected	Brief description of changes
1	20170113	SNA	ALL	Created
2	20170118	SNA	6	Added 2 more applets as required by IFTTT for launch
3	20170223	SNA	2,6,7	Modified registration; Replaced 2 applets with trigger-based ones; Added triggers
4	20170310	SNA	3	Modified ZIPGW section to add portal configuration
5	20170511	SNA	7, 2, 3	Added Multilevel Sensor triggers; added MAC-48 to EUI-64 conversion Fixed ZIPGW log location & rewrote ZIPGW config section
6	20180305	BBR	All	Added Silicon Labs template

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1 INTRODUCTION

1.1 Purpose

The Z-Wave Portal (see [1]) also functions as an IFTTT (If This Then That – see ifttt.com) Channel Server. This document is meant as an addendum to the Z-Wave Web User Guide to explain its IFTTT functionality.

To use the IFTTT Z-Wave Channel, the user needs:

- An IFTTT user account
- A Z-Wave Portal account
- A ZIPGW (Z-Wave over Internet Protocol Gateway) running on a Raspberry Pi3, connected to the Z-Wave Portal.

1.2 Audience and prerequisites

Public who are familiar with IFTTT.

2 Z-WARE PORTAL REGISTRATION

Z-Ware Portal is accessed at <https://z-ware.sigmadesigns.com> . It connects to the user's home through the ZIPGW. The user will register their account through the 'Register' link at the bottom.

Figure 1: Z-Ware Login page

Figure 2: Z-Ware ZIPGW Selection

Figure 3: Z-Ware Registration Page

To create the Portal account, the user needs to select 'ZIP Gateway on Other Boards' fill in the registration details.

First & last names are alphabets only and between 3 to 25 characters in length. Username is of the same length but can be alphanumeric, in addition supporting both '_' (underscore) and '.' (period) special characters. Password must be between 8 to 16 characters in length. The time zone setting allows Z-Ware to convert time information in accordance to the locality of the ZIPGW.

The ZIPGW platform's Ethernet MAC address should be used in EUI-64 format (https://en.wikipedia.org/wiki/Organizationally_unique_identifier#64-bit_Extended_Unique_Identifier_.28EUI-64.29) as the RAC (Remote Access Code) by the user. The Ethernet MAC address can be obtained as specified in Section 3.

On registration, an email is sent to the registered email address which contains an unregister link in case the user entered the wrong details & wishes to reregister. A link to download certificates, named ZIPR.key_1024.pem and ZIPR.x509_1024.pem, is also enclosed and these certificates will have to be downloaded to the platform as specified in Section 3.

3 ZIPGW CONFIGURATION

ZIPGW on the Raspberry Pi 3 (RPi3) platform needs to be configured to use the Z-Wave Portal. This requires ssh/scp access from the host machine to the target RPi3 machine.

3.1 Obtaining Ethernet MAC address of ZIPGW

Search the MAC address in ZIPGW log file at `/var/log/zipgateway.log` on RPi3.

```
# less /var/log/zipgateway.log | grep "L2 HW addr"
```

Or the MAC address can be seen in the beginning of log file as marked below:

```
423881954 Opening config file /usr/local/etc/zipgateway.cfg
Starting Contiki
Opening eeprom file /etc/eeprom.dat
Lan device tap1
LAN HW addr 82:0E:08:5C:12:04
423881955 Starting zipgateway ver2_59b-104-g9f83e5b build ver2_59b-104-g9f83e5b
423881955 Resetting ZIP Gateway
423881955 Using serial port /dev/ttyACM0
SerialAPI: Serial API version : 5.19
423882068 500 series chip version 0
423882071 I'am SUC
423882245 Key class 80
88626FD9816274BDFB685FADBE01E5C6
423882256 Key class 1
2D8815FF311822C5F02E05C66EC0A227
423882263 Key class 2
8A18F1A47B5A150008E01AFF9D693931
423882270 Key class 4
55BE9BA461DF99B14D8B8E9035F9120C
423882273 I'm a primary or inclusion controller.
423882289 Version: Z-Wave 4.45, type 7
423882314 Command rejected because of wrong security class 1
423882314 ..... the version 0 .....423882320 NVM version is 2
423882324 L2 HW addr 00:1e:32:11:4c:92
423882324
423882334 ZIP_Router_Reset: pan_lladdr: e6:3e:5e:d6:00:01 Home ID = 0xd65e3ee6
423882334 Tunnel prefix ::
423882334
423882334 Lan address fd00:aacc::03
423882334
423882334 Han address fd00:bbcc::01
423882334
423882334 Gateway address fd00:aacc::1234
423882334
423882334 Unsolicited address ::
423882334
ECDH Public key is
25481-05552-10457-41310-
39223-17831-43804-32217-
57279-24432-48552-35004-
03960-10321-38537-28542-
423882357 DTLS server started
```

To convert the MAC in MAC-48 format to the RAC in EUI-64, the colons need to be changed to dashes, the letter capitalized and 'FF-FF' needs to be inserted in the middle. For eg:

```
00:1e:32:11:4c:92 -> 00-1E-32-FF-FF-11-4C-92
```

3.2 Downloading certificates to the Raspberry Pi3 platform

On the host machine, copy (scp) the certificates to RPi3:

```
$ scp ZIPR.key_1024.pem ZIPR.x509_1024.pem pi@<ipaddress>:/tmp
```

Move the files on RPi3 to /usr/local/etc:

```
# sudo mv /tmp/ZIPR.key_1024.pem /usr/local/etc/  
# sudo mv /tmp/ZIPR.x509_1024.pem /usr/local/etc/
```

Make sure that the configuration variables **ZipPrivKey** and **ZipCert** in ZIPGW configuration file **/usr/local/etc/zipgateway.cfg**, are mentioning the path respectively to those files as shown below.

```
ZipPrivKey=/usr/local/etc/ZIPR.key_1024.pem  
ZipCert=/usr/local/etc/ZIPR.x509_1024.pem
```

Verify the configuration variables:

```
# less /usr/local/etc/zipgateway.cfg | grep ZipPrivKey  
# less /usr/local/etc/zipgateway.cfg | grep ZipCert
```

3.3 Configuring for Portal

By default the image is set for the ZIPGW to connect to Z-Ware CE on the board. To modify it to connect to Z-Ware Portal, ensure that /usr/local/etc/zipgateway.cfg has the following lines:

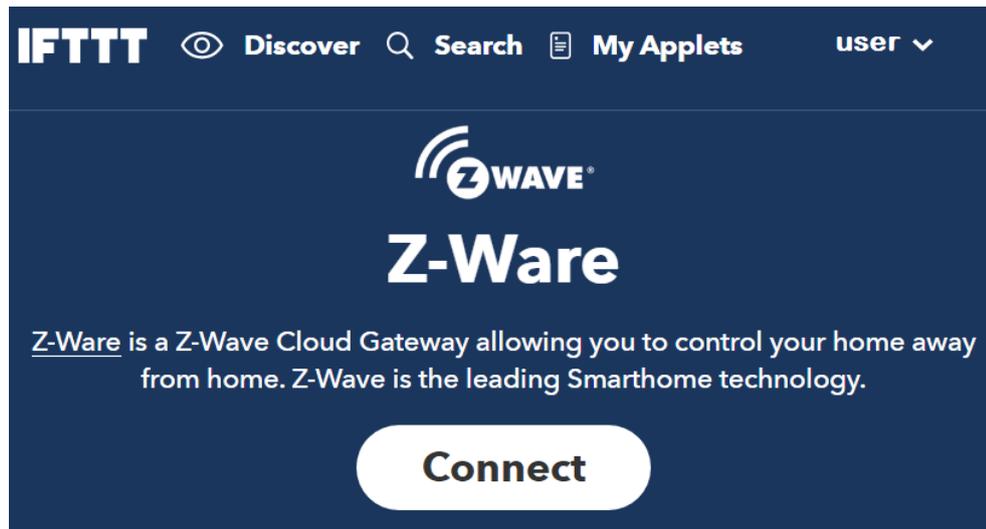
```
ZipPortal=z-ware.sigmadesigns.com  
ZipPortalPort=44123
```

Reboot once the change is made.

4 IFTTT

4.1 IFTTT Channel

The Z-Wave IFTTT channel can be found at <https://ifttt.com/zwave>



Z-Ware triggers and actions

Figure 4: IFTTT Channel

Clicking 'Z-Ware Triggers and actions' reveals the different Triggers and Actions supported. Before these can be used in an IFTTT applet, the user needs to click 'Connect' to log in to the user's existing Z-Ware Portal account.



Figure 5: Z-Ware Portal Login through IFTTT

4.2 IFTTT Applets

4.2.1 Lock your Z-Wave door and turn off your Z-Wave lights and thermostats, when you leave home

This applet works with Android Location service to detect your leaving an area and allows you to set multiple devices off.

4.2.2 Set your Z-Wave dimmer to match any Facebook hashtag

This applet works with your Facebook account to match a specified hashtag and set your dimmer as you specify.

4.2.3 Turn on your Z-Wave thermostat heating at sunset

This applet works with the Weather Underground service to detect sunset and turn your Z-Wave Thermostat Mode to Heating.

4.2.4 Press a button to turn on your Z-Wave switch

This applet works with the IFTTT Button Widget service to turn on your Z-Wave switch.

4.2.5 Send Gmail when your Z-Wave sensor detects motion

This applet works with your Gmail account to notify you of your Z-Wave sensor detecting motion.

4.2.6 Send Gmail when your Z-Wave sensor detects water leak

This applet works with your Gmail account to notify you of your Z-Wave sensor detecting water leak.

4.3 IFTTT Actions

4.3.1 Turn on/off a switch

These 2 actions will turn on or off a Z-Wave binary switch you specify.

Action Fields: Which device?

4.3.2 Lock/Unlock a door

These 2 actions will lock or unlock a Z-Wave door lock you specify.

Action Fields: Which device?

4.3.3 Set a dimmer

This action will set a Z-Wave multilevel switch to a level you specify.

Action Fields: Which device? What level?

4.3.4 Set a thermostat to off/heating/cooling/auto mode

These 4 actions will set a Z-Wave thermostat to the specified mode if supported.

Action Fields: Which device

4.4 IFTTT Triggers

4.4.1 Binary Sensor condition detected / no longer detected

These 12 triggers fire when a Z-Wave sensor detects or no longer detects the specified binary condition.

Trigger Fields: Which sensor?

This covers the following sensor conditions:

1. Motion
2. Smoke
3. Carbon Dioxide
4. Carbon Monoxide
5. Door/Window Contact
6. Water

4.4.2 Multi-Level Sensor value drops below or rises above specified threshold

These 6 triggers fire when a Z-Wave Multi-Level sensor detects a drop below or rise above a threshold.

Action Fields: Which sensor? Threshold Value & Unit

This covers the following sensor values:

1. Temperature
2. Humidity
3. Luminance

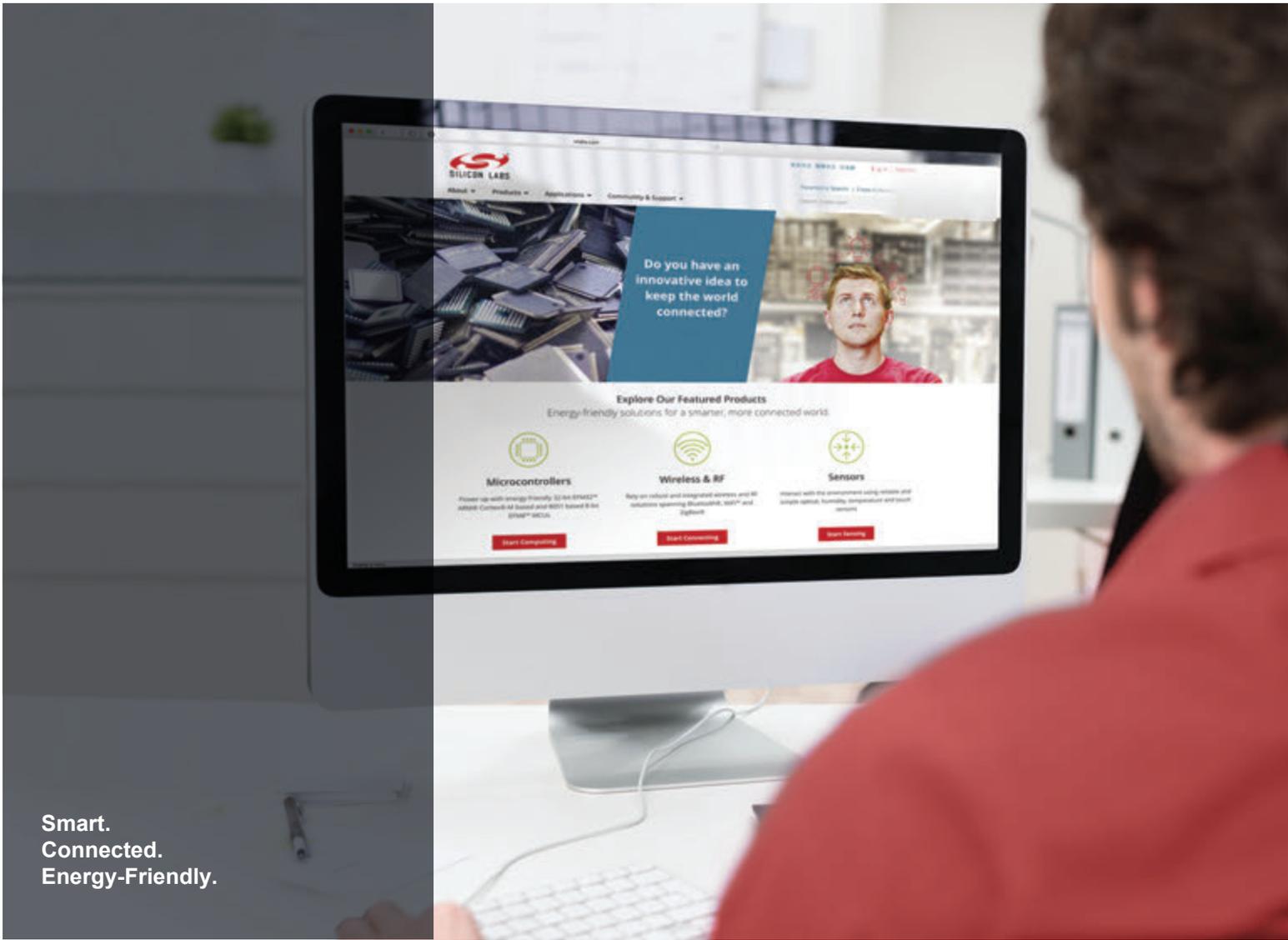
The user must select the correct unit currently used by the sensor for the trigger to work correctly.

4.5 IFTTT User Applets

To create your own Applets, click on “My Applets” in Figure 4: IFTTT Channel and follow the instructions as you proceed. This UI is solely controlled by IFTTT and is subject to change. The only part the Z-Wave channel controls are the parameters to its own actions, triggers and applets.

REFERENCES

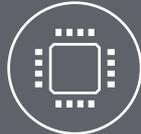
- [1] Silicon Labs, INS12903, Instruction, Z-Ware Web User Guide
- [2] Silicon Labs, Doxygen, Z/IP Gateway User Manual



Smart.
Connected.
Energy-Friendly.



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