



Wander Management
Evaluation Kit
Quick-Start Guide

Friday, September 11, 2020

1.0

PROPRIETARY & CONFIDENTIAL DOCUMENTATION

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Revision History

Revision	Description	Date
1.0	Initial Release	9/11/2020

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1. Overview

Thank you for participating in the evaluation of the Inovonics Wander Management solution. Your feedback will help us deliver a product that integrates easily with your emergency call system and helps senior living communities protect their residents.

This Quick-Start Guide is intended to provide a framework for your evaluation efforts.

Here are some things to know before you begin:

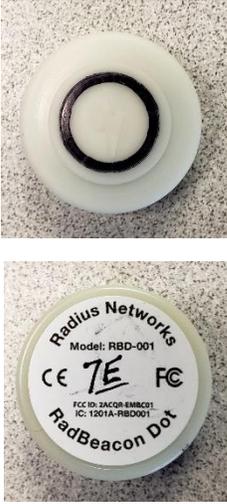
- Download the documentation and demonstration software at <https://www.inovonics.com/1108-2/>. This includes:
 - This Quick-Start Guide.
 - Wander Management Development Guide-DRAFT.pdf. Please peruse to become familiar with system architecture and key features.
 - InovonicsWanderMQTT.yaml and InovonicsWanderOpenAPI.yaml. These are reference documents of our MQTT messaging and HTTP API.
 - InovonicsWanderTestToolkit. This is Python-based demonstration software that you will need to exercise the features of this system.
- The syntax and terminology used are subject to change as we continue to refine the solution.
- The hardware provided in the evaluation kit is intended for demonstration purposes and is not the finished product.
 - The provided wall fixture will not be used in real installations
 - The resident tag is a prototype only
- Initial set-up and exercises are expected to take approximately 4 - 8 hours
- A list of exercises is provided in Appendix A

Expectations:

- The evaluation period is four weeks
- We will establish a cadence of meetings with you throughout the evaluation period for technical support and to gather feedback
- After initial set-up and exercises, we encourage you to perform ‘real world’ tests at your discretion in your simulated environments
- We’re asking for your honest, unvarnished feedback on these topics
 - Ease of use of the provided hardware against the provided test cases and any other tests that you choose to perform
 - Assessment of the effort required to integrate into your E-Call application, following the evaluation period
 - A brief survey is included in Appendix B of this document

2. What's in the Box

Your evaluation kit comes with the following items:

1 BLE test beacon with wrist strap in test housing	1 BLE test beacon without wrist strap in test housing	1 sample of device housing that will be worn by the resident
		

1 Wander Management Test Wall Unit consisting of:

WM4321 keypad reader and WM8311 door controller (hidden under wall unit cover)	Wired-in 12 VDC power supply
	
<p>Test door toggle switch to emulate door sensor input (bottom left of unit)</p>	

Test lock LED to reflect door lock activation (bottom right of unit)

Temporary enclosure for testing (plus Command strips for temporary adhesion to wall)

Also included in the kit is an Ethernet cable necessary for communications with your IP network and an Inovonics branded screwdriver.

If any of the above items are missing or damaged, please contact Inovonics for a replacement.

3. About the Components

3.1. BLE Test beacons

Two BLE test beacons are provided and can be used interchangeably. These are for testing purposes only. They are not waterproof.

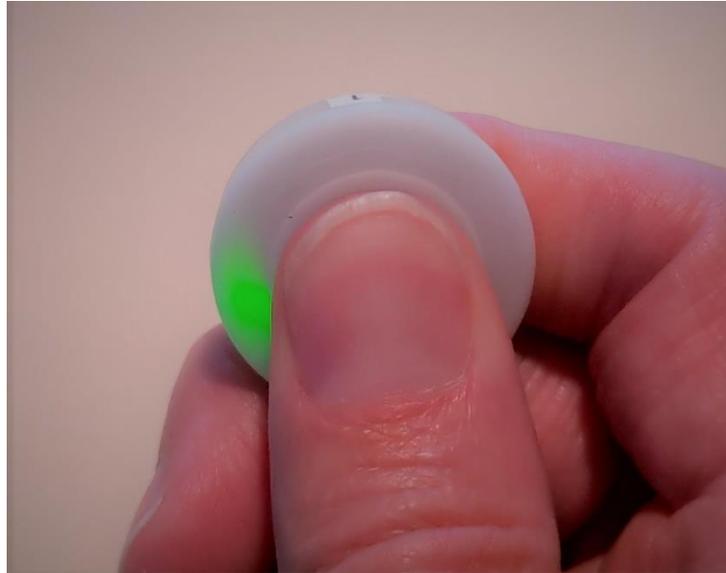
Hold the beacon so that the number on the edge is facing up and away from you and your thumb is in the middle of the black circle.

Pressing in the center should give a slight tactile feedback that the beacon has changed state. (Although you should use the LEDs for positive feedback of the state of the beacon. We have noticed the tactile feedback without the beacon actually changing state). The product version of the BLE beacon will not have this activation button. It is included only to facilitate testing.

We have pre-registered the beacons with the specific WM8311 door controller. So, if you have received more than one Wander Management evaluation kit and use the test beacons from one of the other kits, the operation might appear slightly different than indicated below.

3.1.1. Activate BLE Test beacon

To turn the beacon on, press in the center of the test housing. A green LED inside the beacon case should flash to indicate that it's on and transmitting. NOTE: the green LED might be hidden under your finger. So, you might need to adjust your grip on the beacon slightly.



Green LED indicates beacon activated and transmitting

3.1.2. Deactivate BLE Test beacon

If you press the center of the beacon and the internal red LED flashes, the beacon is now off and not transmitting. Notice that the red LED is on the opposite side from the green LED.



Red LED indicates beacon deactivated and not transmitting

3.2. Sample of Device Housing

Also included is one sample of the resident’s BLE device housing. This is a non-functioning unit and is included for your review. Please note that a custom tamper-resistant strap is currently in development, and we will share that with you at a future date.

3.3. Wander Management Test Wall Unit

The Wander Management Test Wall Unit is made up of a WM4321 keypad reader and WM8311 door controller enclosed in a housing. The wall unit housing is only for test purposes to allow for temporary adhesion to a wall (see included Command™ Adhesive Strips). The actual product will be installed in a single-gang box inside the wall.



At the bottom of the wall unit, you'll notice a test door switch and a test lock LED. The test door "toggle" switch can be used to simulate a door opening and closing. The test lock LED will glow red when the lock is activated. The hole located between the toggle switch and the LED is available to run the power and Ethernet cable.

4. Demonstration Software

The InovonicsWanderTestToolkit is software to demonstrate the operation of the Wander Management system. It's written in Python and is provided as an example of how to communicate with the door controller. Simply copy the InovonicsWanderTestToolkit folder to your workstation from the zip file that you downloaded (see [1. Overview](#)).

4.1. MQTT Client

To start the software, open a command prompt in the directory where you copied the demonstration software. You have two options at this point, 1. Run the pre-built Windows binary OR 2. Run the Python code using the Python environment.

To start the Windows binary, use the following command line:

```
.\InovonicsWanderTestToolkit.exe --address 35.212.197.193:1883 --
username "<username from email>" --password "<password from email>" --
filter "#"
```

So if your username is “iseniorinc” and password is “2439rrdjs098”, the above command would be:

```
.\InovonicsWanderTestToolkit.exe --address 35.212.197.193:1883 --
username "iseniorinc" --password "2439rrdjs098" --filter "#"
```

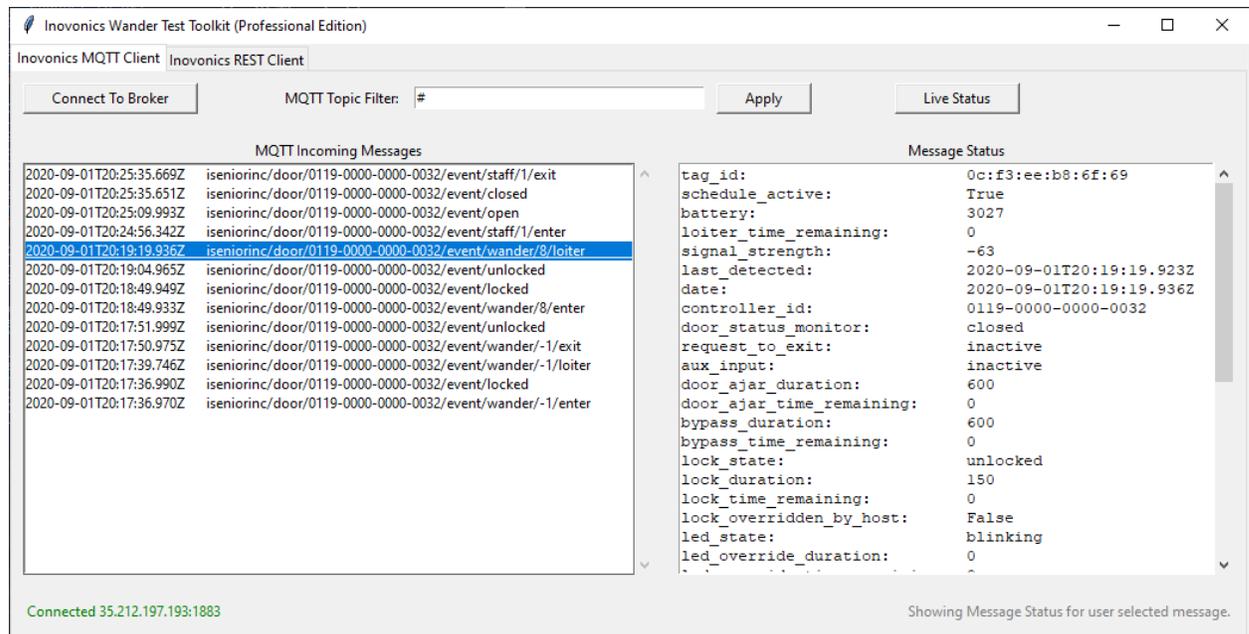
Optionally, to run it as a Python application, first install Python3 and the necessary dependencies

```
pip install -r requirements.txt
```

Then use the following command line:

```
python main.py --address 35.212.197.193:1883 --username "<username from
email>" --password "<password from email>" --filter "#"
```

When the application starts up, you should see a window like the following (note that the messages will be empty until you complete the setup operation below in section 5):



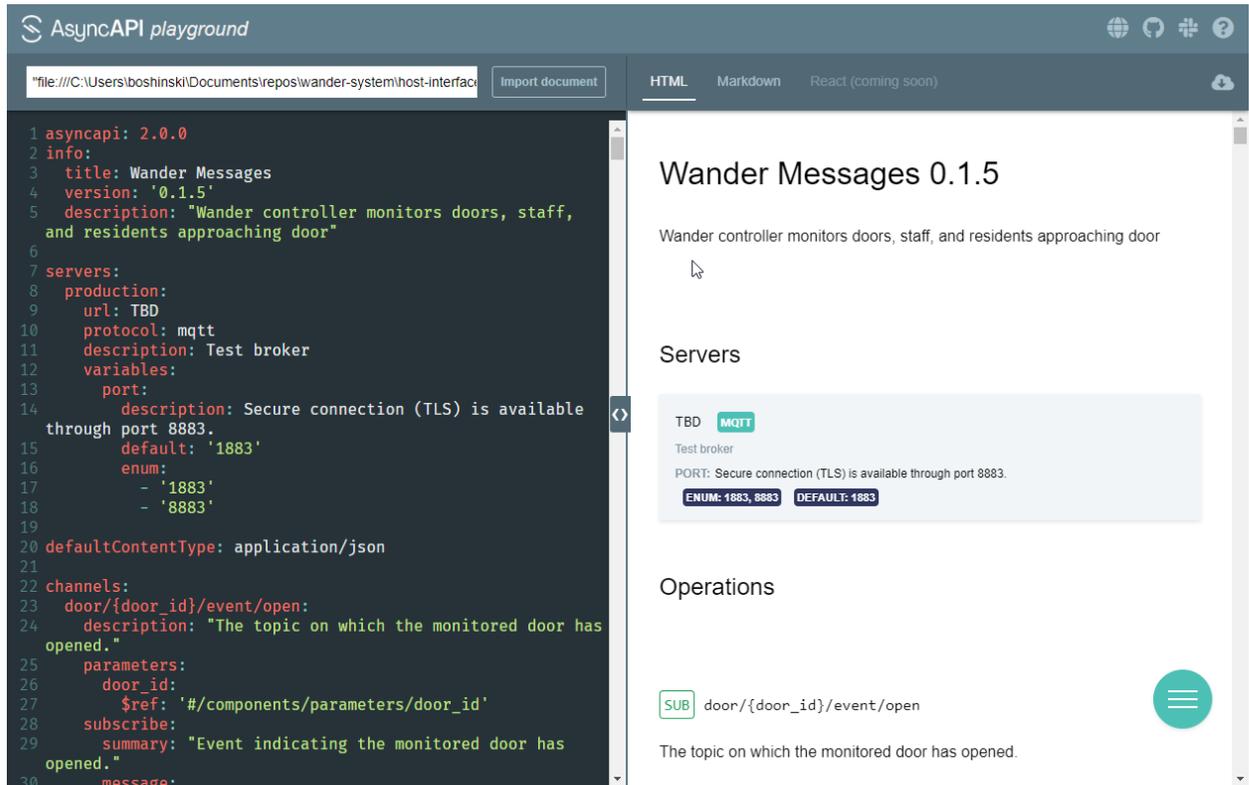
Notice two tabs at the top of the window, “Inovonics MQTT Client” and “Inovonics REST Client”.

When you pass in the MQTT command line parameters (--address, --username, --password), a connection will automatically be attempted at application start-up. You should see “Connected 35.212.197.193:1883” in the bottom left upon success.

The incoming messages are displayed in the left-hand column. If you select one of the incoming messages you will see the payload of the message in the right-hand column.

See the `InovonicsWanderMQTT.yaml` YAML documentation for a complete list of all the MQTT messages. To view the MQTT YAML documentation in a more user-friendly manner, you can go to https://playground.asyncapi.io/?utm_source=editor&utm_medium=editor-topbar&utm_campaign=playground

and import the file. You can either drag-n-drop the `InovonicsWanderMQTT.yaml` file into the left-hand portion of the AsyncAPI playground window or copy-n-paste the contents of the file into the same area. It should appear similar to the following window:



The screenshot shows the AsyncAPI playground interface. On the left, a code editor displays the following YAML content:

```

1 asyncapi: 2.0.0
2 info:
3   title: Wander Messages
4   version: '0.1.5'
5   description: "Wander controller monitors doors, staff,
6     and residents approaching door"
7 servers:
8   production:
9     url: TBD
10    protocol: mqtt
11    description: Test broker
12    variables:
13      port:
14        description: Secure connection (TLS) is available
15        through port 8883.
16        default: '1883'
17        enum:
18          - '1883'
19          - '8883'
20 defaultContentType: application/json
21 channels:
22   door/{door_id}/event/open:
23     description: "The topic on which the monitored door has
24       opened."
25     parameters:
26       door_id:
27         $ref: '#/components/parameters/door_id'
28     subscribe:
29       summary: "Event indicating the monitored door has
30       opened."
31     message:

```

On the right, the rendered HTML view displays the following information:

- Wander Messages 0.1.5**
- Wander controller monitors doors, staff, and residents approaching door
- Servers**
- TBD **MQTT**
- Test broker
- PORT: Secure connection (TLS) is available through port 8883.
- ENUM: 1883, 8883 DEFAULT: 1883
- Operations**
- SUB** door/{door_id}/event/open
- The topic on which the monitored door has opened.

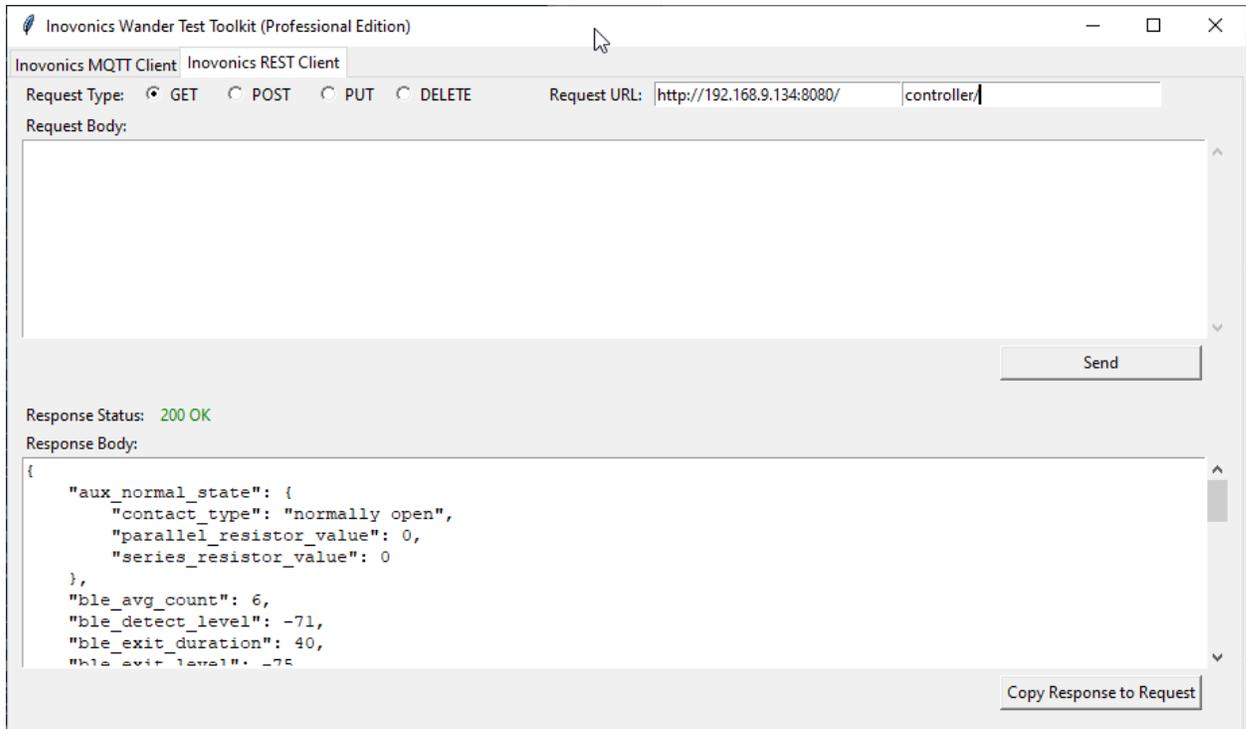
4.2. REST Client

To send REST requests to the WM8311 door controller, select the “Inovonics REST Client” tab at the top of the window. This will display the options to perform GET, POST, PUT and DELETE HTTP requests to the door controller. The hostname and port will be filled in if you pass in the `--base-url` command line parameter at application start-up.

```
--base-url "http://<WM8311 ip address>:8080/"
```

Otherwise you’ll need to enter that information in the first text field of the Request URL.

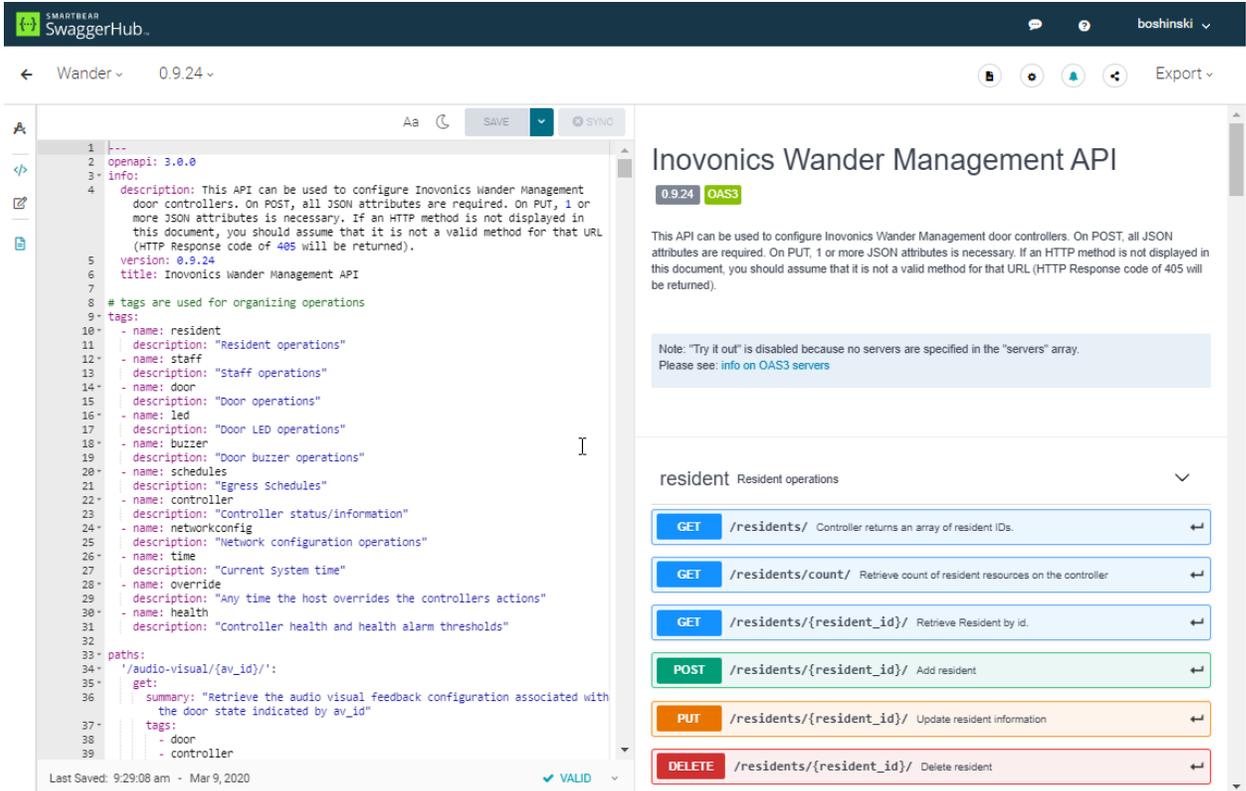
The window should display something like the following:



The example window above shows the execution of a GET <http://192.168.9.134:8080/controller/> request.

So, first you select the operation you want to perform (GET, POST, PUT or DELETE). Next enter the hostname and port, if not already entered. Then the rest of the URL corresponding to the resource you're operating on.

See the `InovonicsWanderOpenAPI.yaml` YAML documentation for a complete list of all the resources and operations. To view the REST YAML documentation in a more user-friendly manner, you can go to <https://swagger.io/tools/swaggerhub/> and import the file. It should appear similar to the following window:



The screenshot shows the SwaggerHub interface for the Inovonics Wander Management API. The left pane displays the OpenAPI specification in JSON format, and the right pane shows the rendered API interface with a list of endpoints for the 'resident' tag.

```

1 ---
2 openapi: 3.0.0
3 info:
4   description: This API can be used to configure Inovonics Wander Management
5   door controllers. On POST, all JSON attributes are required. On PUT, 1 or
6   more JSON attributes is necessary. If an HTTP method is not displayed in
7   this document, you should assume that it is not a valid method for that URL
8   (HTTP Response code of 405 will be returned).
9   version: 0.9.24
10  title: Inovonics Wander Management API
11 # tags are used for organizing operations
12 tags:
13 - name: resident
14   description: "Resident operations"
15 - name: staff
16   description: "Staff operations"
17 - name: door
18   description: "Door operations"
19 - name: led
20   description: "Door LED operations"
21 - name: buzzer
22   description: "Door buzzer operations"
23 - name: schedules
24   description: "Egress Schedules"
25 - name: controller
26   description: "Controller status/information"
27 - name: networkconfig
28   description: "Network configuration operations"
29 - name: time
30   description: "Current System time"
31 - name: override
32   description: "Any time the host overrides the controllers actions"
33 - name: health
34   description: "Controller health and health alarm thresholds"
35 paths:
36   '/audio-visual/{av_id}/':
37     get:
38       summary: "Retrieve the audio visual feedback configuration associated with
39       the door state indicated by av_id"
40       tags:
41         - door
42         - controller

```

The right pane shows the rendered API interface with a list of endpoints for the 'resident' tag:

- GET** /residents/ Controller returns an array of resident IDs.
- GET** /residents/count/ Retrieve count of resident resources on the controller
- GET** /residents/{resident_id}/ Retrieve Resident by id.
- POST** /residents/{resident_id}/ Add resident
- PUT** /residents/{resident_id}/ Update resident information
- DELETE** /residents/{resident_id}/ Delete resident

If you are performing a GET or DELETE, you can just hit the “Send” button to send the request to the door controller. The response will display at the bottom of the window. To make PUT requests simpler, you can first perform a GET request, then click the “Copy Response to Request” button. This will copy the response body to the request body text field where you can make your changes for a PUT operation.

5. Setup and Operation

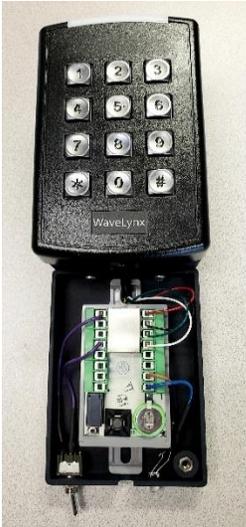
Please follow these steps in the order listed. Before getting started, if you activated the beacons earlier, please deactivate them by clicking the center until the red LED inside the beacon flashes. Also make sure the test door “toggle” switch is in the close position (lever leaning toward test lock LED).

5.1. Start MQTT Client software

Follow the instruction in section 4.1 MQTT Client to start the MQTT client.

5.2. Connecting to Ethernet

Remove the wall unit cover to the WM8311 door controller by removing the screw in the bottom right hand corner.



Connect a CAT5 (or equivalent) cable to the RJ45 connector on the WM8311 door controller and connect the other end to your network switch. The default network configuration uses DHCP to obtain an IP address.

5.3. Connecting Power

Plug in the attached power supply. You can skip this step if you're using a POE switch. Upon power up, the LED above the keypad will sequence through red, yellow and green and then turn off. You will also hear some audible beeps from the sounder. After about 30 seconds the keypad LED should turn solid green.

5.4. Verify MQTT Messages and Obtain IP address

At about the same time that the keypad LED turns solid green, you should see some event messages on the MQTT Client. Click on the incoming event message that ends in `"/event/network"`. In the "Message Status" pane, on the right side of the MQTT Client window, you should see the MQTT message payload. Look for the `"ip_address"` field to get the resolved IP address of the WM8311 door controller.

5.5. Activate Beacon

Take one of the two test beacons (either one) you received in your kit and activate it by pressing the center. Make sure the green LED flashes inside the beacon. Place it near the keypad. You should see a corresponding enter event message (`event/wander/<resident id>/enter`) in the MQTT Client. Immediately following the wander event you should see the door locked event (`event/locked`). You will also see the LED above the keypad display solid yellow and the test lock LED glow red. In this default configuration, the lock will be deactivated after 15 seconds. So, at that point, you'll see the test lock LED turn off and the keypad LED start flashing yellow (indicating wanderer at unlocked closed door). You'll also notice the unlocked event message (`event/unlocked`) displayed in the MQTT Client. Wait another 15 seconds (total of 30 seconds) and you'll see the loiter event message (`event/wander/<resident id>/loiter`) displayed in the MQTT Client and the keypad LED will flash red (indicating loiterer at unlocked closed door).

If you toggle the test door switch open (move lever toward the outside edge of wall unit), you'll see a door open event message (`event/open`), the keypad LED will rapidly flash red and you should hear

an audible beep from the sounder (indicating wanderer at open door). Toggle the test door switch closed to go back to a loiter state.

5.6. Send GET request

Exercise a REST HTTP request to get the door controller information. Follow the steps in section 4.2 [REST Client](#) to open the REST client pane. Select the GET radio button option. Fill in the IP address of your door controller (determined in section 5.4. [Verify MQTT Messages and Obtain IP address](#)) and add port 8080. Then enter “controller/” in the second field of the URL. Hit the “Send” button. You should see a Response Status of “200 OK” and the details of the door controller in the Response Body field.

6. Conclusion

We hope that the material contained in this quick-start guide has been helpful.

Please note that during the testing process we may need to update the software and firmware on the test unit. This operation will be performed using Mender (mender.io) to send over-the-air updates. We will communicate when these updates are available and will only do this in coordination with your schedule.

Appendix A

Exercises

Initial setup

- Complete step 5. Setup and Operation of the Inovonics Wander Quick-Start Guide. These units are in a default factory configuration for time durations, RSSI, network, etc. All these settings can be adjusted as necessary through the RESTful HTTP API. However, for these exercises please use the default configuration.
- Deactivate any test beacons. Make sure test door toggle switch is in the close position, test lock LED is off (representing unlocked), and Keypad LED is green (indicating no wanderer present)
- Read through each exercise completely before starting the exercise. Some of these steps may occur within a few seconds of each other and it may help to know what's coming. It might be easier to have one person reading the instructions and another performing the exercises. If that's not possible, we recommend printing these instructions out, since the exercises require walking away from your computer.
- To make it easier to distinguish new event messages occurring, click on the top-most message in the MQTT Incoming Messages list of the demonstration software. New messages from these exercises will appear above it as they come in.

Exercise #1: Individual wanderer approaches reader with default settings

1. Initial State: No wanderer present (all test beacons deactivated). Door closed (test door toggle switch in close position) and unlocked.
 - a. Keypad LED is solid green (A/V state #8)
 - b. Test lock LED is off (representing the maglock is deactivated)
2. At a distance greater than 30 feet, activate the test BLE beacon (either with or without a strap). Make sure the green LED in the beacon flashes momentarily.
3. Approach the Wander Management Test Wall Unit.
4. Verify that
 - a. Test Lock LED glows red (representing the maglock being activated),
 - b. Keypad Reader LED is solid amber and no sounder (A/V state #6)
 - c. Door-locked and wander-enter event messages received by demonstration software
5. Wait 15 seconds and verify that door unlocks
 - a. Test lock LED turns off (representing the maglock being deactivated)
 - b. Keypad Reader LED is flashing amber (A/V state #5)
 - c. Door-unlocked event message received by demonstration software
6. Wait 15 more seconds and verify that a loitering condition occurs
 - a. Keypad LED is flashing red (A/V state #4)
 - b. Wander-loiter event message received by demonstration software
7. Leave beacon near Wander Management Test Wall Unit

Exercise #2: Second wanderer approaches unlocked door and then both leave after one minute

1. Initial State: Exercise #1 completed correctly and first test BLE beacon still active and in proximity to wall unit.
 - a. Keypad LED is flashing red (A/V state #4)
 - b. Test lock LED is off (representing the maglock is deactivated)
 - c. Select the top-most message in the “MQTT Incoming Messages” list of the demonstration software.
2. At a distance greater than 30 feet from the wall unit, activate the second test BLE beacon. Make sure the green LED in the beacon flashes momentarily.
3. Approach the Wander Management Test Wall Unit.
4. Verify that
 - a. Test Lock LED glows red (representing the maglock being activated),
 - b. Keypad Reader LED is solid amber and no buzzer (A/V state #6)
 - c. Door-locked and wander-enter event messages received by demonstration software
5. Wait 15 seconds and verify that door unlocks
 - a. Test lock LED turns off (representing the maglock being deactivated)
 - b. Keypad Reader LED is flashing red (A/V state #4)
 - c. Door-unlocked event message received by demonstration software
6. Wait 15 more seconds and verify that a loitering condition occurs
 - a. Keypad Reader LED is still flashing red (A/V state #4)
 - b. Wander-loiter event messages received by demonstration software
7. Take both test beacons a distance greater than 30 feet away from the wall unit and verify exit event occurs. It may take up to 7 seconds based on the default configuration. **Deactivate the both test BLE beacons. Make sure the red LED in the beacon flashes momentarily.**
 - a. Two wander-exit event messages received by demonstration software. One for each test beacon.
 - b. Keypad Reader LED is solid green (A/V state #8)

Exercise #3: Staff (PIN) escorts a wanderer through the managed door

1. Initial State: No wanderer present (all test beacons deactivated). Door closed (test door toggle switch in close position) and unlocked.
 - a. Keypad LED is solid green (A/V state #8)
 - b. Test lock LED is off (representing the maglock is deactivated)
 - c. Select the top-most message in the “MQTT Incoming Messages” list of the demonstration software.
2. At a distance greater than 30 feet, activate the test BLE beacon (either with or without a strap). Make sure the green LED in the beacon flashes momentarily.
3. Approach the Wander Management Test Wall Unit.
4. Verify that
 - a. Test Lock LED glows red (representing the maglock being activated),
 - b. Keypad Reader LED is solid amber and no buzzer (A/V state #6)

- c. Door-locked and wander-enter event messages received by demonstration software
5. Within 15 seconds of the resident being detected, enter the PIN (followed by pound sign) already configured into the controller for staff member #1. Press "3", "0", "0", "3", "#".
 - a. Keypad Reader LED is flashing green (A/V state #2)
 - b. Staff enter event message received by demonstration software
 - c. Door-unlocked event message received by demonstration software
6. Within 10 seconds of entering the PIN, open the door (toggle the door switch so that it's in the open position).
 - a. Door-open event message received by demonstration software
7. Deactivate the test BLE beacon. Make sure the red LED in the beacon flashes momentarily. This simulates the resident being escorted through and away the door.
 - a. A wander-exit event message received by demonstration software. May take up to 7 seconds to receive this event message.
8. Staff member closes the door (toggle the door switch so that it's in the close position)
 - a. Staff exit event message received by demonstration software
 - b. Door-closed event message received by demonstration software
 - c. Keypad LED is solid green (A/V state #8).

Exercise #4: Wanderer present when door opens

1. Initial State: No wanderer present (all test beacons deactivated). Door closed (test door toggle switch in close position) and unlocked.
 - a. Keypad LED is solid green (A/V state #8)
 - b. Test lock LED is off (representing the maglock is deactivated)
 - c. Select the top-most message in the "MQTT Incoming Messages" list of the demonstration software.
2. At a distance greater than 30 feet, activate the test BLE beacon (either with or without a strap). Make sure the green LED in the beacon flashes momentarily.
3. Approach the Wander Management Test Wall Unit.
4. Verify that
 - a. Test Lock LED glows red (representing the maglock being activated),
 - b. Keypad Reader LED is solid amber and no sounder (A/V state #6)
 - c. Door-locked and wander-enter event messages received by demonstration software
5. Wait 15 seconds and verify that door unlocks
 - a. Test lock LED turns off (representing the maglock being deactivated)
 - b. Keypad Reader LED is flashing amber (A/V state #5)
 - c. Door-unlocked event message received by demonstration software
6. Open the door (toggle the door switch so that it's in the open position).
 - a. Door-open event message received by demonstration software
 - b. Keypad Reader LED is flashing red rapidly and sounder is chirping (A/V state #3)
7. Close the door (toggle the door switch so that it's in the close position) and deactivate the test beacon.
 - a. Door-closed event message received by demonstration software

- b. A wander-exit event message received by demonstration software. May take up to 7 seconds to receive this event message. May also see a wander-loiter event message depending on the timing.
- c. Keypad LED is solid green (A/V state #8).

Exercise #5: Door becomes ajar - no wanderers present.

1. Initial State: No wanderer present (all test beacons deactivated). Door closed (test door toggle switch in close position) and unlocked.
 - a. Keypad Reader LED is solid green (A/V state #8)
 - b. Test lock LED is off (representing the maglock is deactivated)
 - c. Select the top-most message in the “MQTT Incoming Messages” list of the demonstration software.
2. Open the door (toggle the door switch so that it's in the open position).
 - a. Door-open event message received by demonstration software
3. After 60 seconds
 - a. Door-ajar event message received by demonstration software
 - b. Keypad Reader LED is flashing green and amber (A/V state #7)
4. Close the door (toggle the door switch so that it's in the close position)
 - a. Door-closed event message received by demonstration software
 - b. Keypad Reader LED is solid green (A/V state #8)

Exercise #6: Delete and re-add a resident

1. Initial State: No wanderer present (all test beacons deactivated). Door closed (test door toggle switch in close position) and unlocked.
 - a. Keypad Reader LED is solid green (A/V state #8)
 - b. Test lock LED is off (representing the maglock is deactivated)
 - c. Select the top-most message in the “MQTT Incoming Messages” list of the demonstration software.
2. Delete resident id 1
 - a. Click on the "Inovonics REST Client" tab at the top of the demonstration software window.
 - b. Select the DELETE request type radio button. Make sure the Request URL matches the IP address of the controller plus the 8080 port number. For example, if the IP address is 192.168.9.134, the left-hand text field of the Request URL should be "http://192.168.9.134:8080/". The right-hand text field should be "residents/1/" to remove resident number 1 from the controller. Don't leave out any of the slashes!
 - c. Click the "Send" button
 - d. You should receive a response status of "204 OK" and an empty response body.
3. Try to GET that same resident now.
 - a. Select the GET request type radio button.
 - b. Click the "Send" button

- c. You should receive a response status of "404 ERROR" and a response body with the reason "resident 1 does not exist"
 4. To re-add that resident, you'll need to determine the tag id (BLE MAC address) of that test beacon.
 - a. Click back on the "Inovonics MQTT Client" tab at the top of the demonstration software window.
 - b. While in close proximity to Wander Management Test Wall Unit, activate the strapless test BLE beacon. Make sure the green LED in the beacon flashes momentarily.
 - c. You should see a wander-enter event message with a negative one for the id, representing an unknown user (i.e., "event/wander/-1/enter").
 - d. Deactivate the test beacon.
 - e. Select that wander-enter event message in the "MQTT Incoming Messages" list on the left-hand side of the demonstration software window.
 - f. In the "Message Status" pane on the right-hand side, you should see the details of that event message. Look for the "tag_id" field (should be at the top). This value represents the unique BLE MAC address for the test beacon. It will look something like: "0c:f3:ee:b8:70:e1". Select the MAC address value with your mouse and copy the value to the clipboard.
 - g. Click on the "Inovonics REST Client" tab again at the top of the demonstration software window.
 - h. Select the POST request type radio button. Make sure the Request URL matches the IP address of the controller plus the 8080 port number. The right-hand text field should be "residents/1/" to add resident number 1 to the controller.
 - i. To add the resident with an always-active schedule and a loiter duration of 30 seconds (300 tenths of a second), add the following to the "Request Body" text field (double-quotes are important in the JSON below):

```
{  
  
  "schedule_id": 1,  
  
  "loiter_duration": 300,  
  
  "tag_id": "<paste MAC address from clipboard here>"  
  
}
```
 - j. Click the "Send" button
 - k. You should receive a response status of "204 OK" and an empty response body.
 5. Verify the resident was added
 - a. Click back on the "Inovonics MQTT Client" tab at the top of the demonstration software window.
 - b. While in close proximity to Wander Management Test Wall Unit, activate the test BLE beacon. Make sure the green LED in the beacon flashes momentarily.
 - c. You should see a wander-enter event message with a one for the id, representing resident with id 1 (i.e., "event/wander/1/enter")
 - d. Deactivate the test beacon.

Appendix B Survey

(Online Link will be sent 1 week prior to end of evaluation period)

How easy or difficult was it to execute the set up procedure?

1	2	3	4	5
Very Easy	Easy	Neutral	Difficult	Very Difficult

Rate the performance against recommended exercises in Appendix A

Exercise	Pass/Fail	Observations
1		
2		
3		
4		
5		
6		

1. Was the information provided in the quick start guide sufficient to support your evaluation efforts?

Yes

No

If not, what additional information can we provide?

2. Is the information provided in the development guide sufficient to support your efforts to integrate with your e-call application software?

Yes

No

If not, what additional information can we provide?

3. What is your initial assessment for the amount of time (days/weeks) and effort (low/medium/high) required to integrate with your e-call application software?

4. How satisfied are you with the system design and performance of the evaluation kit?

1	2	3	4	5
Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied

5. What should we consider as we finalize the initial product prior to release?