

# //Build/2015

## AllJoyn Z-Wave Device System Bridge demo

### Setup Guide

This document describes the setup of the AllJoyn Z-Wave demo that is provided at //Build/2015 as part of the Raspberry Pi2 image. It will demonstrate the function of the Z-Wave AllJoyn Device System Bridge (DSB).

### Prerequisites

1. Raspberry Pi2 with //Build/2015 image

This is the RPi2 that was handed out at the conference. The image contains the driver for the Aeon Labs Z-Wave Stick and the Z-Wave DSB.

2. Z-Wave devices

Two Aeon Labs Z-Wave devices are needed for this demo:

- [Aeon Labs DSA02203-ZWUS Z-Wave Z-Stick Series 2 USB Dongle](#)
- [Aeon Labs DSC24-ZWUS Smart Switch Z-Wave Appliance Module](#)

Microsoft will provide a limited number of devices at the conference. If you are not able to get a set there, they are also available in a different online stores.

3. PC or Laptop with Windows 10

- Windows 10 preview – build 10069 or later
- AllJoyn Explorer (AJX)

### Setup

#### Setting up the Raspberry Pi2

1. Do not plug in the Z-Wave USB dongle yet
2. Connect your Raspberry Pi2 to the LAN (via hub or direct via cross over or Auto MDI-X)
3. Connect power to start the Raspberry Pi2
4. Verify that the PC can access the Raspberry Pi2 with the Windows IoT Core Watcher
5. Firewall settings need to be changed for AllJoyn: open a PowerShell session to the Raspberry Pi2 and execute the following command:  
**netsh advfirewall set allprofiles state off**

#### Pair the Z-Wave device

1. Do not plug in the Z-Wave USB dongle yet
2. Z-Wave Dongle and Z-Wave switch need to be in close proximity
3. Tap the circular button to put the Z-Stick in inclusion mode. The LED should start to blink slowly.
4. Once the Z-Stick is inclusion mode, plug the Z-Wave switch in (it will not function without being connected to power) and press the power button to add it to the Z-Wave network. The light on

the controller will blink fast during neighbor discovery and stay solid for 3 seconds to indicate successful inclusion of the device to the network.

5. Once the LED returns to blinking slowly, tap the button on the Z-Stick again to turn off inclusion mode.
6. Insert the USB Z-Stick into the RPi2.

The setup should look like in the picture below



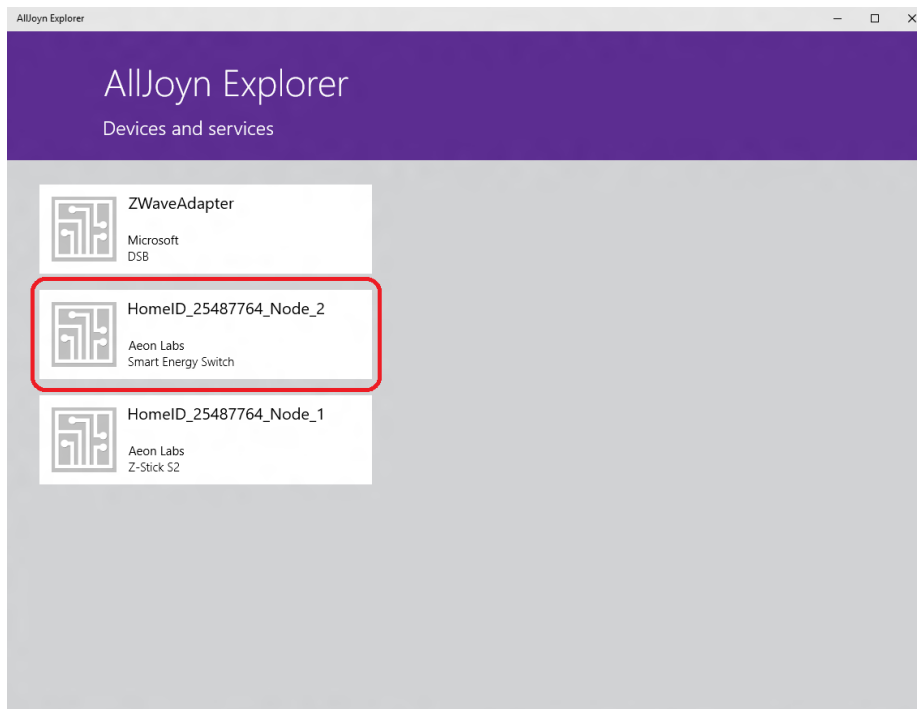
## Controlling the Z-Wave switch via AllJoyn

Let's turn the Z-Wave power switch on! We will use the AllJoyn Explorer (AJX) to navigate the devices, objects and interfaces.

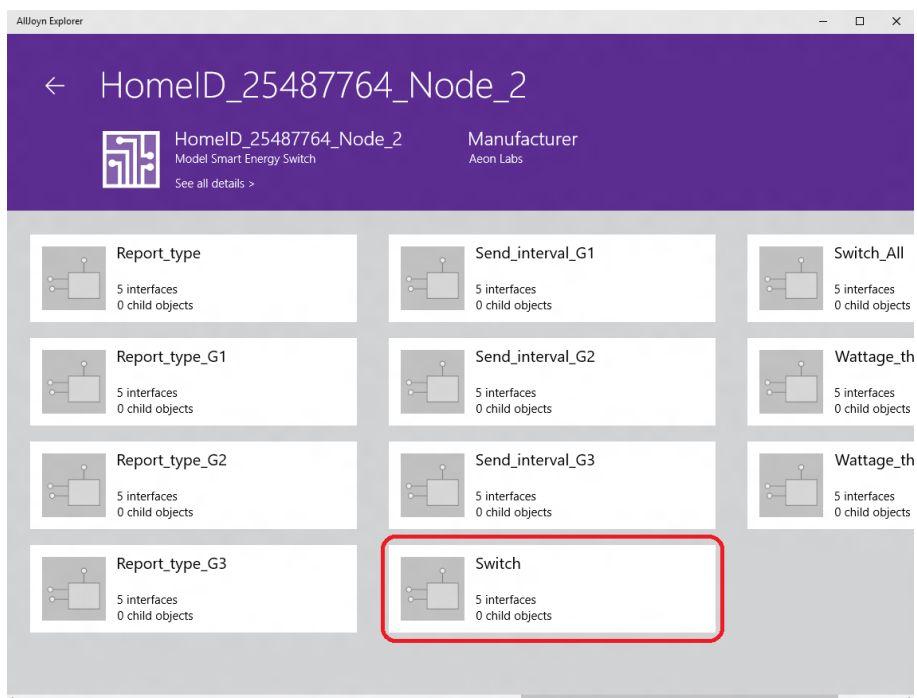
The AJX should find the following three devices:

- ZWaveAdapter – Microsoft DSB: This is the Z-Wave DSB
- HomeID\_... – Aeon Labs Smart Energy Switch: This is the Z-Wave power switch that is paired with the Z-Wave dongle
- HomeID\_... – Aeon Labs Z-Stick S2: This is the Z-Wave USB dongle

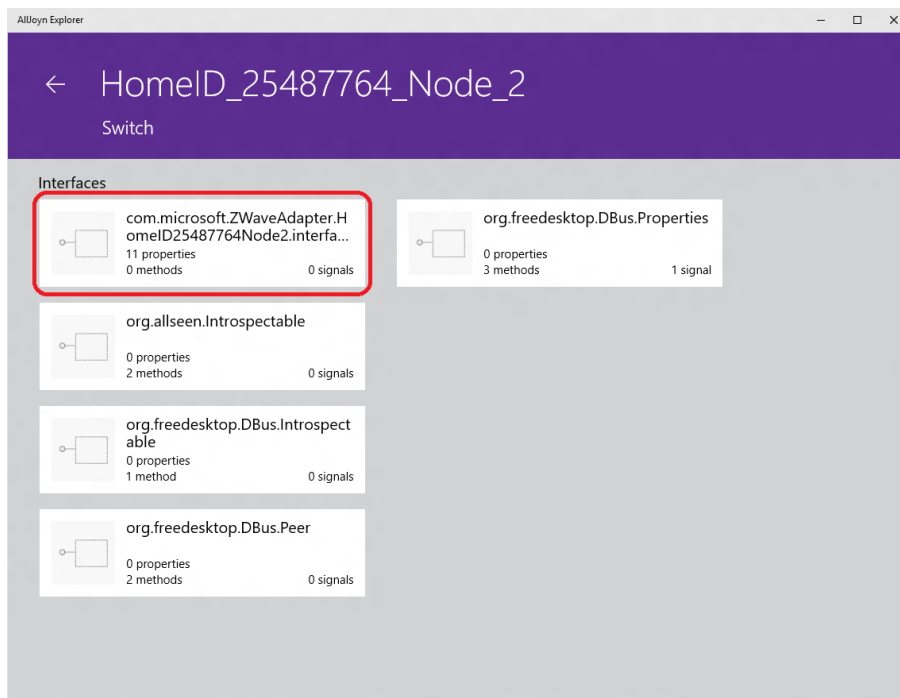
Select the **Aeon Labs Smart Energy Switch**.



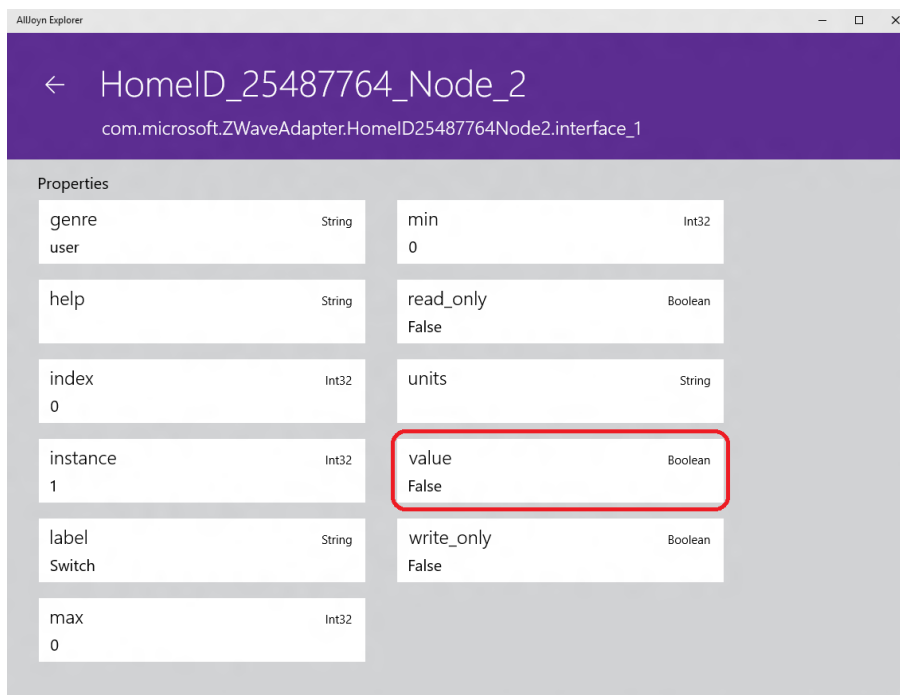
Select the **Switch** object.



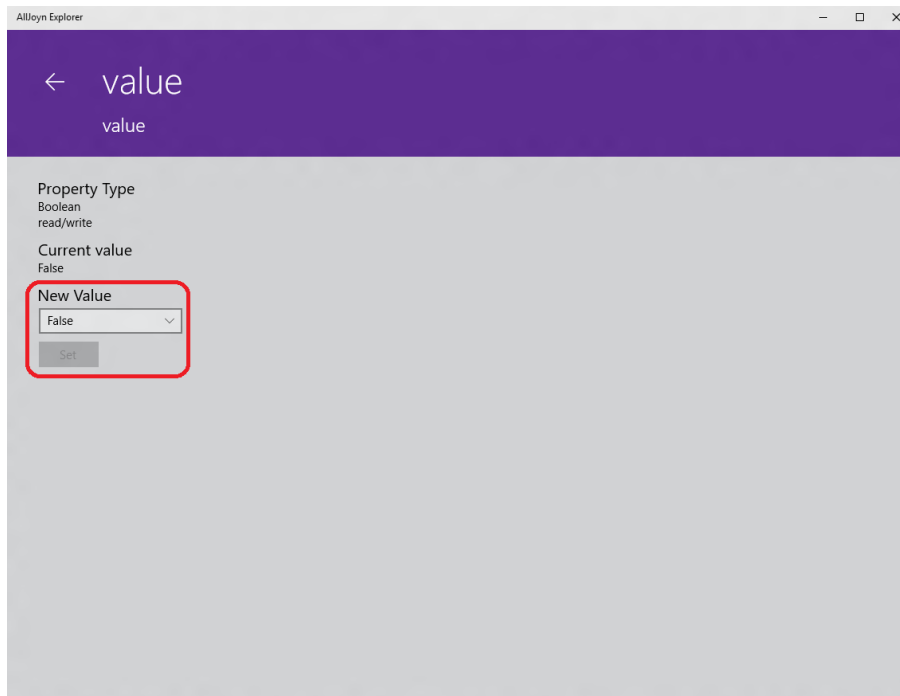
The interface view of the Switch object lists several interfaces. Most of them are default AllJoyn interfaces such as the *Introspectable* interface. Select the ***com.microsoft.ZWaveAdapterHome...*** interface.



Select the ***value*** property.



Depending on the current state of the switch (on or off) the *Current value* field will show *true* for ON and *false* for OFF. In the **New Value** drop down list select the new setting. After the new setting is selected press **Set**.



The view will report the change of the value in the **Current value** field as well as the return status code of the operation.

