

//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

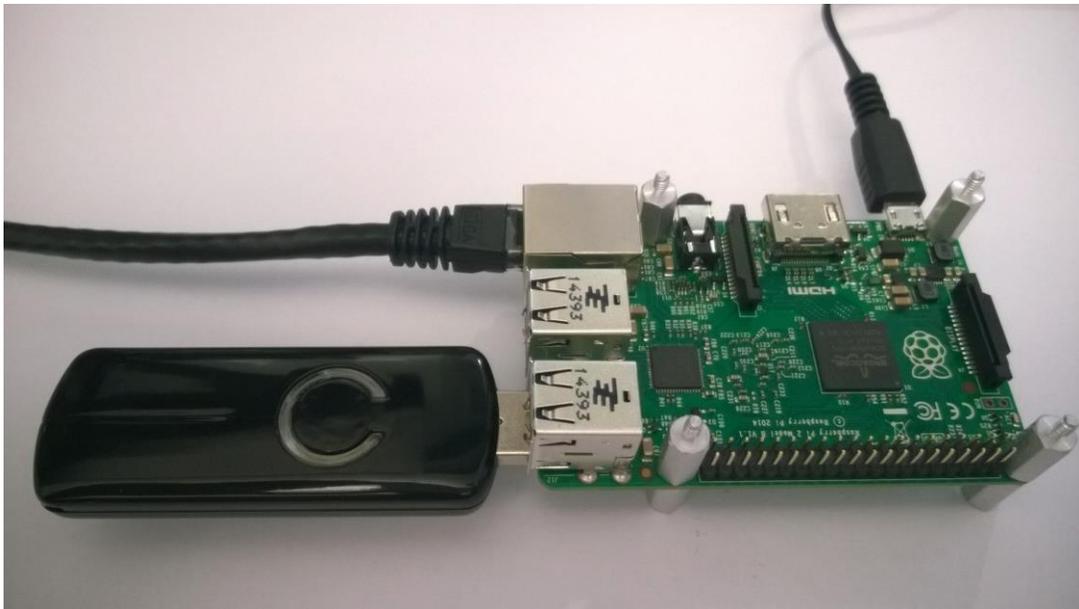
1. Do not plug in the Z-Wave USB dongle yet
2. Connect your Raspberry Pi2 to the LAN (via hub or direct via cross over or Auto MDI-X)
3. Connect power to start the Raspberry Pi2
4. Verify that the PC can access the Raspberry Pi2 with the Windows IoT Core Watcher
5. ~~Firewall settings need to be changed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

Note: Step 5 above is no longer required as firewall issues have been resolved with the 5/12 release.

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 in 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



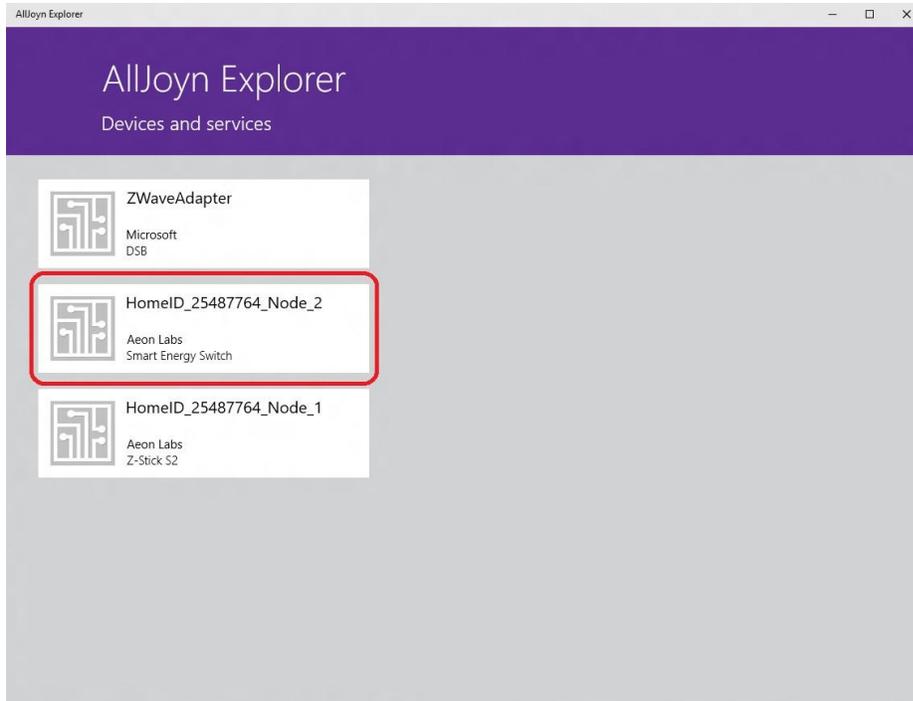
Controlling the Z-Wave switch via AllJoyn

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

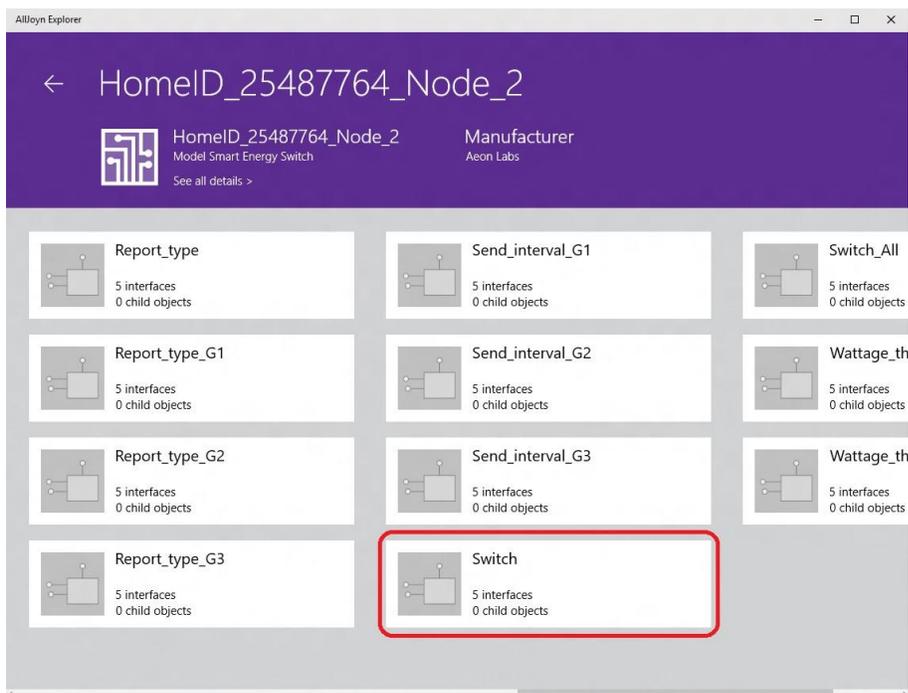
The AJX should find the following three devices:

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

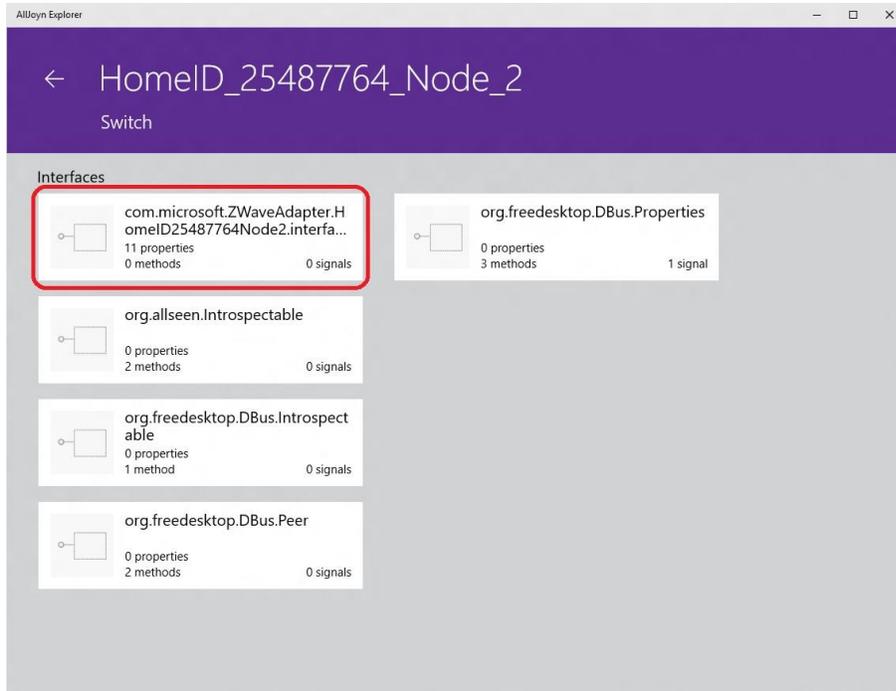
Select the **Aeon Labs Smart Energy Switch**.



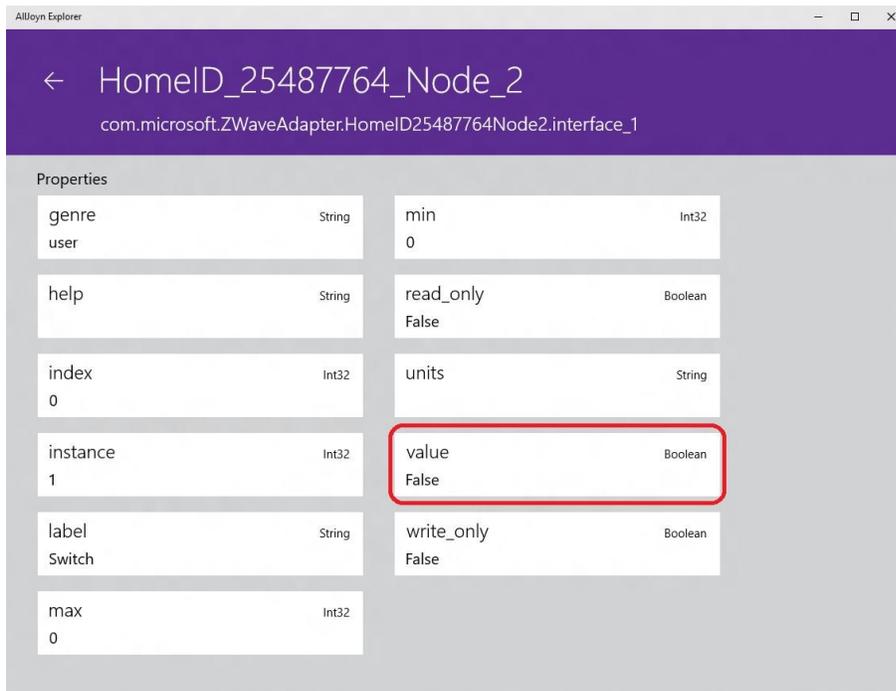
Select the **Switch** object.



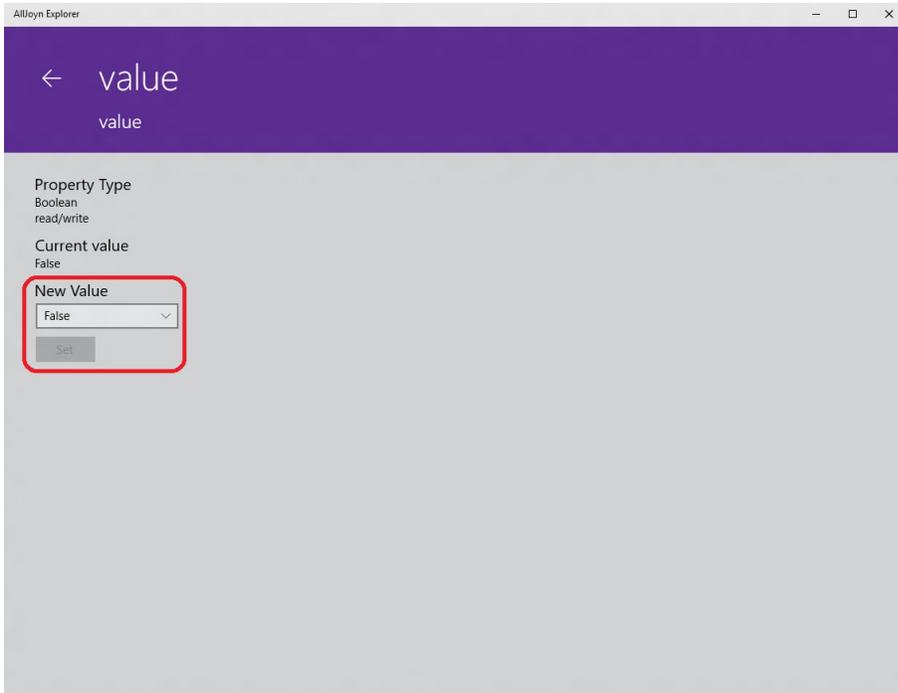
The interface view of the Switch object lists several interfaces. Most of them are default AllJoyn interfaces such as the *Introspectable* interface. Select the **com.microsoft.ZWaveAdapterHome...** interface.



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.

