chowmain
software & apps

Saturn South
Virtual ES Box

Driver Installation Guide

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Solution Overview

The Saturn South Virtual ES Box is a driver written by Chowmain Ltd to emulate ES Box functionality through Control4. This allows Saturn South zigbee devices to join the Control4 Zigbee Network with the ability to still send the data to ESCo servers such as ourgreenhome.com.au

Sending data to ESCo servers enables the home owner to track historical usage and generation data. Saturn meters by themselves do not have the storage capacity to store anything more than cumulative and current data. As such integration with ESCo's are a necessity for historical readings.

Note that this driver is written to only offer basic functionality that will work with ourgreenhome.com.au. It may work with other ESCo servers however it has not been tested against them.

The Virtual ES Box driver can also upload data from eGauge devices by simulating each CT clamp as a seperate Virtual Saturn South Meter.

- Supports multiple devices.
- Does not require real ES Box hardware
- Sends all saturn south / egauge device data to the ESCo every 5 seconds.
- Sends a snapshot of the device every 5 minutes to the ESCo (synced to the hour)
- Ability to add monitor multiple saturn south meters.

Equipment Required:

Saturn South
- Mini CT Meter – **Saturn SS9007.X, SS9005.0.X**

eGauge
- eGauge EG9XXX device

Software Requirement:
- **ComposerPro 2.6** and above

Before you install:
- Ensure that the Saturn Mini/eGauge CT Meter is physically installed correctly and programmed/communicating with Control4.

Section 1: Programming

Driver Installation

1. The driver you have downloaded will be in a zip file. Double click on this file to open it in your preferred zip program (WinZip, WinRar, etc.).

2. Extract the c4z file to the My Documents\Control4\Drivers directory. If you are using Windows 7 or 8 this will be extracted to the Libraries\Documents\Control4\Drivers directory.

3. You are now ready to add and configure the driver via the Composer Pro software.
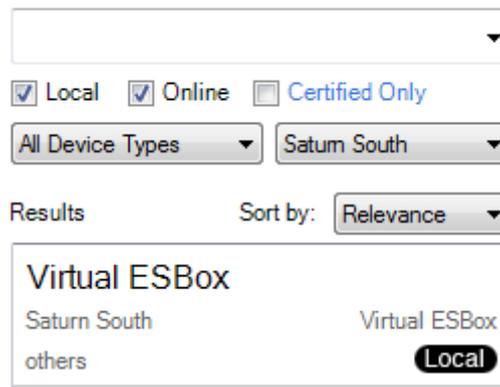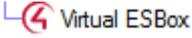
Important Notice

It is assumed that you have added and configured the Saturn South SS9000HA/SS9005HA meter driver and/or the eGauge EG3000 driver to the project. If you are using the EG3000 it is important that you fill out the MAC Address field in the properties tab as this is used in the ESBox driver. You can find the MAC Address of the EG3000 on the physical box itself or in the Status page in the unit's inbuilt webserver.

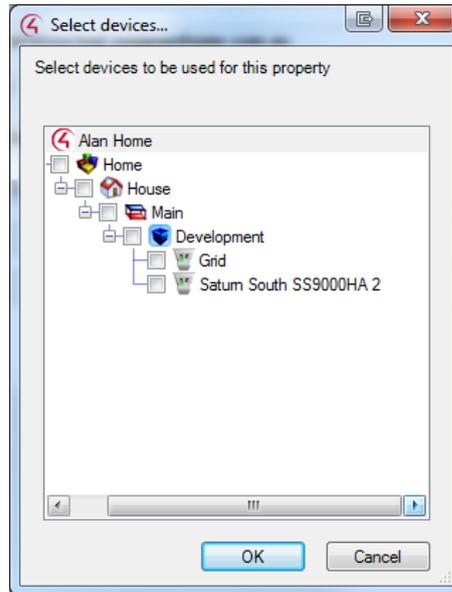## Adding the driver to your project

1. Launch the Composer Pro application and connect to your project

2. In the '**System Design**' page select the '**Search**' tab on the right hand side.

3. Select '**Saturn South**' as the manufacturer.

4. Double click on the '**Virtual ESBox**' driver to add it to your project

5. Highlight the '**Virtual ESBox**' driver on the left hand side.

6. Enter in your Houselogix licencing details.

7. If you have Saturn South Devices. Follow steps 7 to 10. If you do not have these devices and have an eGauge device jump to step 11.

8. In the driver properties click on the Select button next to the Saturn South Meters property

9. Select the Saturn Devices you wish to monitor

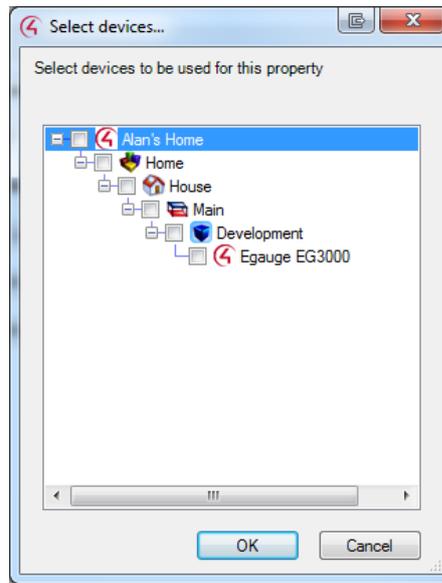10. Click on the OK Button

11. Click on the Set Button

12. If you do not have any eGauge products please skip to step 16.

13. In the driver properties click on the Select button next to the eGauge Meters property

14. Select the eGauge devices you want to monitor

15. Click on the OK Button

16. Click on the Set Button

17. Type in the ESCo Server Details and click on the Set Button. By default this is set up for our green home's ESCo server details.

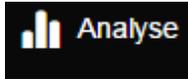| Primary ESCo Address	listener-c4.ourgreenhome.com.au
Primary ESCo Path	/
Primary ESCo Port	9090

18. Make sure that the Server Status is of status Connected and that the Last Poll time changes

Server Status	Connected
Last Poll	Wed Jul 6 15:30:30 2016

19. Congratulations you have setup the Saturn South Virtual ESBox driver for Control4.

Section 2: Setting up Our Green Home

1. Visit the http://www.ourgreenhome.com.au website

2. Log into your account

3. Click on Analyse

   ![Analyse button]

4. Click on Edit monitoring units

5. Click on Add a new hub

   Energy Hubs + Add a new hub

6. Enter a meaningful name for your device under '**Name**'

7. Enter in the '**MAC address of your Master Control4 controller'** under HUB ID.

8. Select '**SaturnSouth ESBox**' as the Type.

9. Click on Save

Status	Hub ID	Hub Type	Name	
●	~~~~~~~~~~	SaturnSouth ESBox	Saturn South Virtual ESBox	✖

10. Click on Add a new device

    Energy Devices + Add a new device

11. Enter a meaningful name for your device under '**Give your device a name**'

12. Select '**Saturn South Mini CT Meter**' under the Device Type drop down

13. If you are using a '**Saturn South Mini CT Meter'** then In the Device ID field type in your meters **EUID** that we noted earlier

    NOTE: The Meter EUID is the address that populates the meter's identification window in the Connections / Network Tab.

14. If you are using an '**eGauge Meter'** then In the Device ID field type in your eGauge's MAC address with the circuit number after it represented in hexadecimal format **'XX'**

    EG: MACADDRESS of F82F5B002B01 and circuit 1 will be represented as F82F5B002B0101

    EG: MACADDRESS of F82F5B002B01 and circuit 10 will be represented as F82F5B002B010A

15. Select your HUB from the drop down list

16. Click on Add Device

Status	Device ID	Device Type	Name
✓	▬▬▬▬▬▬▬	SaturnSouth Mini CT Meter	Grid ✖

17. Repeat Steps 10 to 15 for each Saturn South Mini CT Meter you want to add in.

Licencing

Chowmain drivers require a valid licence to use the driver. Drivers can be purchased from our distributor Houselogix however all Chowmain drivers come with a 48 hour trial. We recommend that prior to purchasing a driver that you test the driver out to ensure that it will work with your hardware and will meet your requirements. This trial system is built into the driver and is activated when you first add the driver to the project.

Upon adding the driver to your project you will notice the following fields in the driver's property page.

Activation Key	
Activation Status	11/24/2014 8:23: TRIAL - 48 HOURS REMAINING
Driver Version	1.0
Control4 MAC Address	000FFF164A48

The Activation Status will tell you the licencing status of your driver. If you are in a trial period it will display TRIAL with the amount of time remaining until the trial is over.

Once the trial is over you can purchase a licence from our distributor Houselogix. Upon receiving your licence enter this into the Activation Key field. The Activation Status will then advise what it is checking with Houselogix to verify that the licence you have entered is valid.

Activation Status	Checking key, please wait

If it is not valid then the activation status will reply FAILURE – INVALID KEY

Activation Status	11/24/2014 8:24: FAILURE - INVALID KEY

If the licence is valid for the driver / your controller's mac address then the activation status will change to ACTIVATED.

Activation Status	11/24/2014 8:27: ACTIVATED

The driver will work as long as the trial is active or you have a valid licence.