

EDS XML Reader – Python Version 1.00

Python

This program was written in Python 3.3.0. At the time this document was written most computers did not come with Python 3 installed. Python can be downloaded from this website for Windows, Mac or Linux:

<http://www.python.org/download/>

To run the program when it is double clicked from the Finder in Mac and Linux, it is necessary to place a 'shebang' (!) line at the beginning of the program that tells the operating system where to find the desired version of Python. The screenshot below illustrates a #! line for the Mac, and below it is the #! line for Linux that is not functional because of the space between # and !.

```
#!/Library/Frameworks/Python.framework/Versions/3.3/bin/python3
# !/usr/bin/env python3

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import os
import xml.etree.ElementTree as ET
```

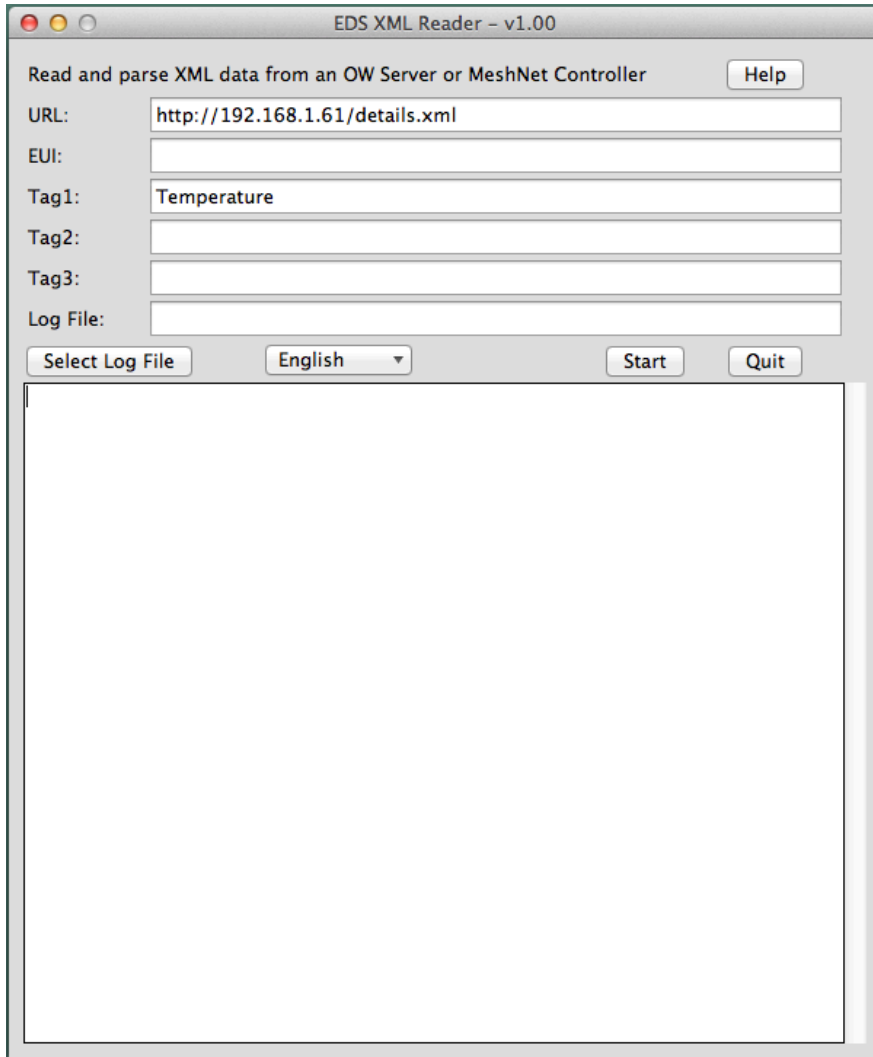
Operation

This software reads XML data from an OW Server or MeshNet Controller every second, converts it to a comma separated format, displays it to the information window and optionally appends it to a file.

The program reads from one OW Server or MeshNet Controller only.

The program operates in one of two modes. It can read up to 3 items from a single device (sensor), or it can read the same item from all the devices on the OW Server or MeshNet Controller. When the "EUI" field is empty, the program reads all the "Tag 1" items in the XML file. When the "EUI" field is valid it will use that field to determine which device to read data from, then it will use the names in "Tag 1", "Tag 2" and "Tag 3" to get the appropriate data.

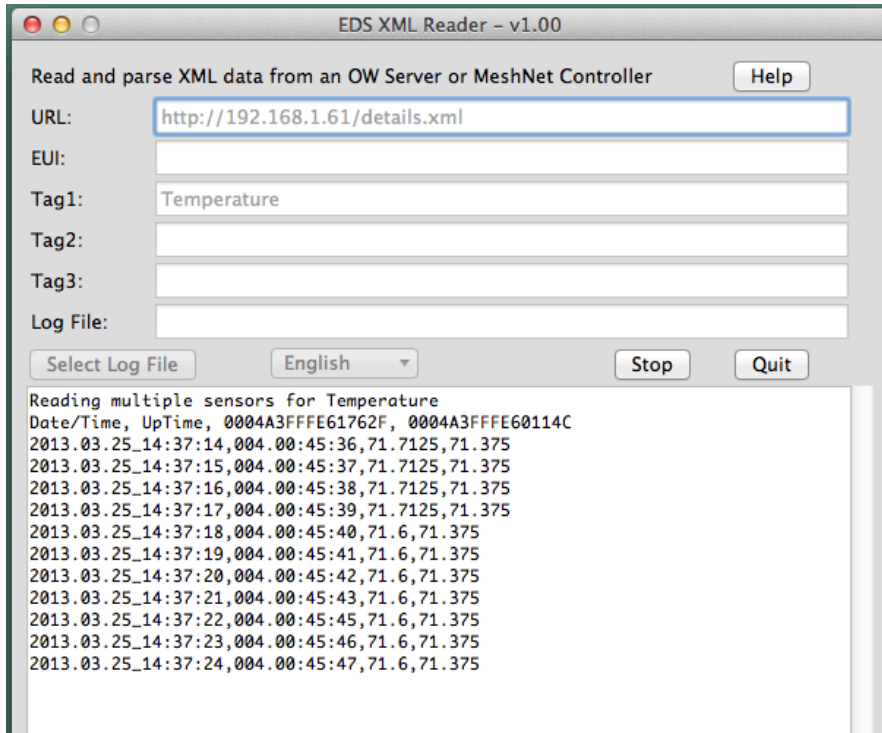
If a log file is selected, data will be saved to the file in comma separated format with a header at the beginning. This file may then be imported to a spreadsheet.



Reading 1 Tag From Multiple Devices

To read 1 tag from multiple devices follow these steps. Refer to the screen shot below.

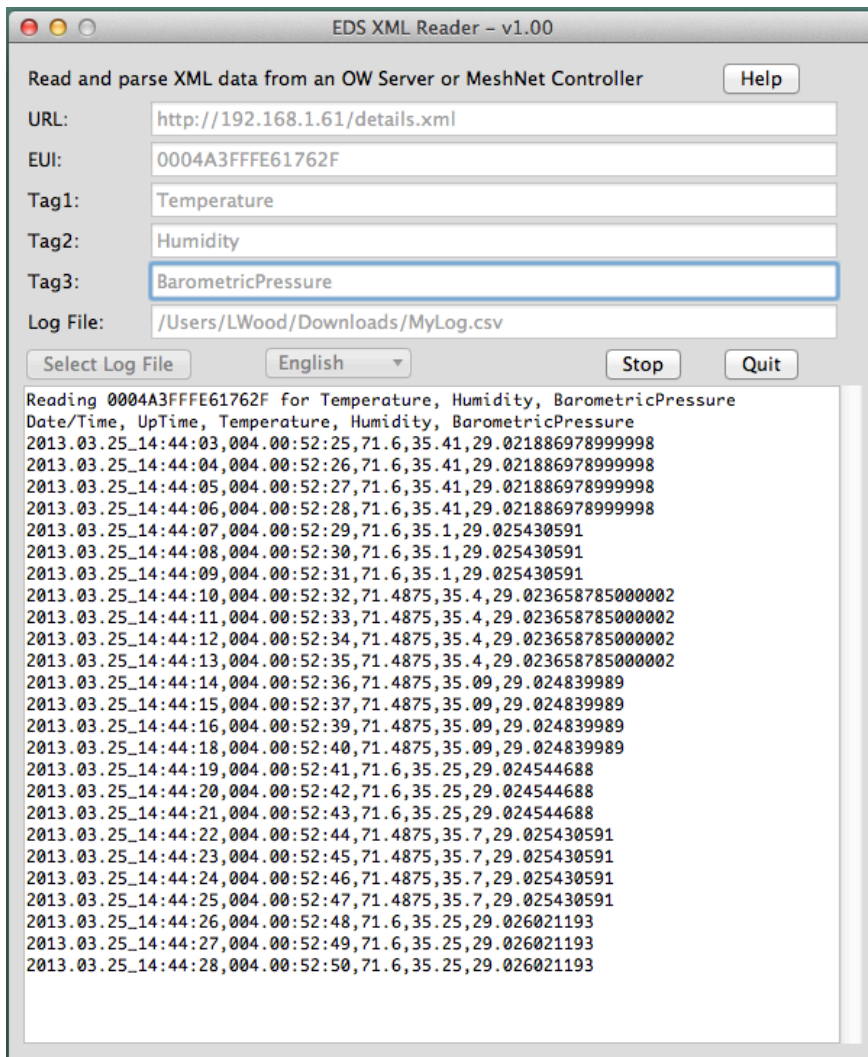
- Set the 'URL' to the correct location.
- Enter the desired XML tag name to read in 'Tag 1'.
- Make certain the 'EUI' field has no characters in it.
- Click 'Select Log File' and enter a filename and location so the data will be saved.
- Select the units, Metric or English. The program currently converts temperature and barometric pressure.
- Click 'Start'.



Reading Multiple Tags From One Device

To read up to 3 tags from 1 sensor, follow these steps.

- Select the correct URL.
- Enter the XML tag names in the fields 'Tag 1', 'Tag 2' and 'Tag 3'. If only 2 tags are to be read, leave 'Tag 3' empty. If only 1 tag is to be read, leave 'Tag 2' and 'Tag 3' empty.
- Enter the EUI or ROMID of the device to read in the 'EUI' field.
- Click 'Select Log File' to write the data to a file.
- Select the desired units, Metric or English.
- Click 'Start'



Below is an example of the log file.

```
MyLog.csv
Reading 0004A3FFFE61762F for Temperature, Humidity, BarometricPressure
Date/Time, UpTime, Temperature, Humidity, BarometricPressure
2013.03.25_14:44:03,004.00:52:25,71.6,35.41,29.021886978999998
2013.03.25_14:44:04,004.00:52:26,71.6,35.41,29.021886978999998
2013.03.25_14:44:05,004.00:52:27,71.6,35.41,29.021886978999998
2013.03.25_14:44:06,004.00:52:28,71.6,35.41,29.021886978999998
2013.03.25_14:44:07,004.00:52:29,71.6,35.1,29.025430591
2013.03.25_14:44:08,004.00:52:30,71.6,35.1,29.025430591
2013.03.25_14:44:09,004.00:52:31,71.6,35.1,29.025430591
2013.03.25_14:44:10,004.00:52:32,71.4875,35.4,29.023658785000002
2013.03.25_14:44:11,004.00:52:33,71.4875,35.4,29.023658785000002
2013.03.25_14:44:12,004.00:52:34,71.4875,35.4,29.023658785000002
2013.03.25_14:44:13,004.00:52:35,71.4875,35.4,29.023658785000002
2013.03.25_14:44:14,004.00:52:36,71.4875,35.09,29.024839989
2013.03.25_14:44:15,004.00:52:37,71.4875,35.09,29.024839989
2013.03.25_14:44:16,004.00:52:39,71.4875,35.09,29.024839989
2013.03.25_14:44:18,004.00:52:40,71.4875,35.09,29.024839989
2013.03.25_14:44:19,004.00:52:41,71.6,35.25,29.024544688
2013.03.25_14:44:20,004.00:52:42,71.6,35.25,29.024544688
2013.03.25_14:44:21,004.00:52:43,71.6,35.25,29.024544688
2013.03.25_14:44:22,004.00:52:44,71.4875,35.7,29.025430591
2013.03.25_14:44:23,004.00:52:45,71.4875,35.7,29.025430591
2013.03.25_14:44:24,004.00:52:46,71.4875,35.7,29.025430591
2013.03.25_14:44:25,004.00:52:47,71.4875,35.7,29.025430591
2013.03.25_14:44:26,004.00:52:48,71.6,35.25,29.026021193
2013.03.25_14:44:27,004.00:52:49,71.6,35.25,29.026021193
2013.03.25_14:44:28,004.00:52:50,71.6,35.25,29.026021193
2013.03.25_14:44:29,004.00:52:51,71.6,35.1,29.023363484
2013.03.25_14:44:30,004.00:52:52,71.6,35.1,29.023363484
2013.03.25_14:44:31,004.00:52:53,71.6,35.1,29.023363484
2013.03.25_14:44:32,004.00:52:54,71.6,35.1,29.023363484
2013.03.25_14:44:33,004.00:52:55,71.6,35.41,29.027497698
2013.03.25_14:44:34,004.00:52:57,71.6,35.41,29.027497698
2013.03.25_14:44:35,004.00:52:58,71.6,35.41,29.027497698
2013.03.25_14:44:37,004.00:52:59,71.4875,35.09,29.025430591
2013.03.25_14:44:38,004.00:53:00,71.4875,35.09,29.025430591
2013.03.25_14:44:39,004.00:53:01,71.4875,35.09,29.025430591
2013.03.25_14:44:40,004.00:53:02,71.4875,35.09,29.025430591
2013.03.25_14:44:41,004.00:53:03,71.6,35.55,29.024839989
2013.03.25_14:44:42,004.00:53:04,71.6,35.55,29.024839989
2013.03.25_14:44:43,004.00:53:05,71.6,35.55,29.024839989
2013.03.25_14:44:44,004.00:53:06,71.6,35.41,29.025430591
```

How To Determine XML Names

Variable names can be determined by viewing the XML file. On the main webpage of an OW Server or MeshNet Controller, select the Advanced menu, then Details.

Home **Advanced** ▾ System Configuration ▾ Contact us

*Health ranges fr

→ Details	EUI 0004A3FFFE60114C	Device EDS1068
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Duration: 15 Minutes ▾ Value: None ▾

The screen shot below shows part of the XML data. Any line with a “Write” button on the right can be written. For example, the first item that can be written in the XML data below is “UserName”, and it is this text string that would be used as the ‘Tag’ name.

Firmware Version: 1.13
Devices connected: 1
Date / Time: 2012-12-13 15:54:26
Up Time: 000.00:18:44
Device Name: WirelessController-Enet
Host Name: EDSWIRELESSCTRL
MAC Address: 00:04:A3:7A:DF:1A
Connection status: OK

Data activity
 Enable auto update

Name	EDS1068	
Description	Temperature, Humidity, Barometric Pressure and Light Sensor	
EUI	0004A3FFFE60114C	
ControllerRSSI	-34	
Address	1	
Repeater	0	
Health	7	
PrimaryValue	37.17 %RH	
UserName	Car - Shaded	Write
Temperature	23.0625	
Humidity	37.17	
DewPoint	7.6250	
Humidex	23.3125	
HeatIndex	24.1875	
BarometricPressure	995.310	
Light	11	
Battery	3.55	
LED	0	
Relay	0	
Input1	0	
ActivityLatch1	0	
PulseCounter1	0	
ActivityLatchReset	-	Write
ReadCounter	300	
ConnectionCounter	1	
MessageAttempts	300	
MessagePacketRetries	6	
MessageFailures	0	
ResetMessageCounters	-	Write
DeviceRSSI	-40	
TemperatureHighAlarmState	0	
TemperatureLowAlarmState	0	
HumidityHighAlarmState	0	
HumidityLowAlarmState	0	
DewPointHighAlarmState	0	
DewPointLowAlarmState	0	
HumidexHighAlarmState	0	
HumidexLowAlarmState	0	
HeatIndexHighAlarmState	0	
HeatIndexLowAlarmState	0	
BarometricPressureHighAlarmState	0	
BarometricPressureLowAlarmState	0	
LightHighAlarmState	0	
LightLowAlarmState	0	
BatteryLowAlarmState	0	
ClearAlarms	-	Write
TemperatureHighAlarmValue	93	Write
TemperatureLowAlarmValue	-40	Write
HumidityHighAlarmValue	96	Write
HumidityLowAlarmValue	0	Write
DewPointHighAlarmValue	104	Write
DewPointLowAlarmValue	-40	Write
HumidexHighAlarmValue	125	Write
HumidexLowAlarmValue	-40	Write
HeatIndexHighAlarmValue	125	Write
HeatIndexLowAlarmValue	-40	Write
BarometricPressureHighAlarmValue	2000.000	Write
BarometricPressureLowAlarmValue	0.000	Write

Development Environment

This software was developed on Aptana Studio 3. Python 3.3.0.

Software License

The EDS XML Reader software and source code license is shown below.

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