

SCK Eduroam WEP64 Connection #64

Edit

New issue

Closed

 ppyordanov opened this issue on Dec 12, 2014 · 3 comments

PY

ppyordanov commented on Dec 12, 2014

In order to conduct an initial data gathering session around campus, a wi-fi network needs to be used for data transmission between devices. The prototype Android application and SCK were tested on my personal wi-fi network and everything works as expected.

However, when connecting to "eduroam" on-campus in order to start collecting data updated, the kit simply gets into an infinite loop of trying to re-connect to the network, emitting the following message visible via the Arduinos 1.6 serial monitor:

- "FAIL, handshake" (after a TCP three duplicate ACK/acknowledgement/ timeout)

The on-campus network authentication protocol is WEP64 (Wired Equivalent Privacy) while I am using WPA2 on my modem (Wi-Fi Protected Access 2). I am convinced that this has to do with the "eduroam" network configuration and is not an issue resulting from SCK misconfiguration (waiting for more updates from Richard who mentioned that he might be familiar with what could be causing this). Meanwhile, alternative approaches will be tested.

Labels

enhancement

Milestone

Evaluation

Assignee

PY ppyordanov

Notifications

Unsubscribe

You're receiving notifications because you modified the open/close state.

1 participant

PY

Lock issue

ppyordanov added the enhancement label on Dec 12, 2014

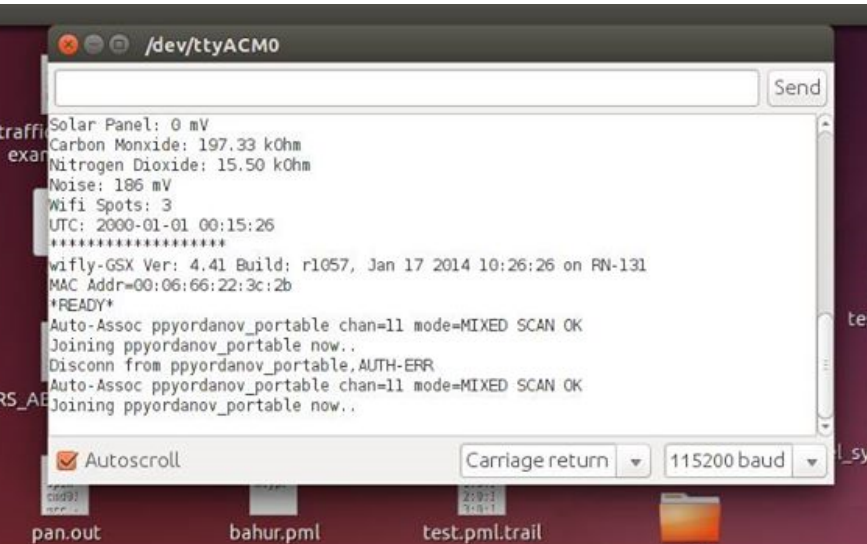
ppyordanov self-assigned this on Dec 12, 2014

ppyordanov added this to the Evaluation milestone on Dec 12, 2014

PY

ppyordanov commented on Dec 12, 2014

This issue kept persisting and an alternative approach was adopted. I set up my mobile device as an acces point (hotspot) using the Android's portable wi-fi hotspot functionality and used it to enable the Smart Citizen Kit to transmit sensor updates without issues. The whole system is now functioning properly in controlled environment and I will be conducting a complete test around University of Glasgow campus later today:



Here is a testing log using the portable wi-fi hotspot:

Please, wait wifly sleep

terminal screenshot

Solar Panel: 0 mV  
Carbon Monoxide: 197.33 kOhm  
Nitrogen Dioxide: 15.50 kOhm  
Noise: 186 mV  
Wifi Spots: 3  
UTC: 2000-01-01 00:15:26  
\*\*\*\*\*  
wifly-GSX Ver: 4.41 Build: r1057, Jan 17 2014 10:26:26 on RN-131  
MAC Addr=00:06:66:22:3c:2b  
\*READY\*  
Auto-Assoc ppyordanov\_portable chan=11 mode=MIXED SCAN OK  
Joining ppyordanov\_portable now..  
Disconn from ppyordanov\_portable.AUTH-ERR  
Auto-Assoc ppyordanov\_portable chan=11 mode=MIXED SCAN OK  
Joining ppyordanov\_portable now..

```
EXIT
Error in connectionn!!
Temperature: 26928 C RAW
Humidity: 25708 % RAW
Light: 88.90 lx
Battery: 100.00 %
Solar Panel: 0 mV
Carbon Monxide: 181.69 kOhm
Nitrogen Dioxide: 26.54 kOhm
Noise: 0 mV
Wifi Spots: 3
UTC: 2014-12-12 02:35:03
*****

SCK Connected!!
updates = 13
Posted to Server!
Old connection active. Closing...
Temperature: 26920 C RAW
Humidity: 26216 % RAW
Light: 88.90 lx
Battery: 100.00 %
Solar Panel: 0 mV
Carbon Monxide: 191.53 kOhm
Nitrogen Dioxide: 26.56 kOhm
Noise: 0 mV
Wifi Spots: 3
UTC: 2014-12-12 2:42:21
*****

SCK Connected!!
updates = 1
Posted to Server!
Old connection active. Closing...
Temperature: 26840 C RAW
Humidity: 25936 % RAW
Light: 88.90 lx
Battery: 100.00 %
Solar Panel: 0 mV
Carbon Monxide: 180.86 kOhm
Nitrogen Dioxide: 26.53 kOhm
Noise: 7 mV
Wifi Spots: 3
UTC: 2014-12-12 2:42:43
*****

SCK Connected!!
updates = 1
Posted to Server!
Old connection active. Closing...
Temperature: 26892 C RAW
Humidity: 25912 % RAW
Light: 88.90 lx
Battery: 100.00 %
Solar Panel: 0 mV
Carbon Monxide: 190.66 kOhm
Nitrogen Dioxide: 26.68 kOhm
Noise: 6 mV
Wifi Spots: 3
UTC: 2014-12-12 2:43:17
*****

SCK Connected!!
updates = 1
Posted to Server!
Old connection active. Closing...
Temperature: 26908 C RAW
Humidity: 25888 % RAW
Light: 88.90 lx
Battery: 100.00 %
Solar Panel: 0 mV
Carbon Monxide: 181.62 kOhm
Nitrogen Dioxide: 26.95 kOhm
Noise: 3 mV
Wifi Spots: 3
UTC: 2014-12-12 2:43:43
*****

SCK Connected!!
updates = 1
Posted to Server!
Old connection active. Closing...
Temperature: 26916 C RAW
Humidity: 25792 % RAW
Light: 88.90 lx
Battery: 100.00 %
Solar Panel: 0 mV
Carbon Monxide: 191.47 kOhm
Nitrogen Dioxide: 27.02 kOhm
```

Noise: 15 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:44:08  
\*\*\*\*\*  
SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26900 C RAW  
Humidity: 25868 % RAW  
Light: 87.60 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monxide: 181.48 kOhm  
Nitrogen Dioxide: 27.08 kOhm  
Noise: 72 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:44:47  
\*\*\*\*\*  
SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26912 C RAW  
Humidity: 25160 % RAW  
Light: 87.60 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monxide: 192.44 kOhm  
Nitrogen Dioxide: 27.46 kOhm  
Noise: 34 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:45:17  
\*\*\*\*\*  
SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26900 C RAW  
Humidity: 25756 % RAW  
Light: 88.90 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monxide: 181.76 kOhm  
Nitrogen Dioxide: 27.49 kOhm  
Noise: 50 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:45:42  
\*\*\*\*\*  
SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26936 C RAW  
Humidity: 25460 % RAW  
Light: 88.90 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monxide: 191.59 kOhm  
Nitrogen Dioxide: 27.78 kOhm  
Noise: 37 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:46:17  
\*\*\*\*\*  
SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26960 C RAW  
Humidity: 25412 % RAW  
Light: 88.90 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monxide: 181.72 kOhm  
Nitrogen Dioxide: 27.76 kOhm  
Noise: 135 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:46:38  
\*\*\*\*\*  
SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26976 C RAW

Humidity: 25208 % RAW  
Light: 87.60 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monxide: 192.49 kOhm  
Nitrogen Dioxide: 27.90 kOhm  
Noise: 151 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:47:12  
\*\*\*\*\*  
SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 27000 C RAW  
Humidity: 25024 % RAW  
Light: 87.60 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monxide: 182.68 kOhm  
Nitrogen Dioxide: 28.03 kOhm  
Noise: 0 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:47:46  
\*\*\*\*\*  
SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26980 C RAW  
Humidity: 25136 % RAW  
Light: 87.60 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monxide: 191.57 kOhm  
Nitrogen Dioxide: 28.04 kOhm  
Noise: 0 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:48:18  
\*\*\*\*\*  
SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26956 C RAW  
Humidity: 25112 % RAW  
Light: 87.60 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monxide: 182.12 kOhm  
Nitrogen Dioxide: 28.07 kOhm  
Noise: 0 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:48:43  
\*\*\*\*\*  
SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26924 C RAW  
Humidity: 25240 % RAW  
Light: 87.80 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monxide: 191.49 kOhm  
Nitrogen Dioxide: 28.16 kOhm  
Noise: 2 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:49:18  
\*\*\*\*\*  
SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26916 C RAW  
Humidity: 25220 % RAW  
Light: 87.80 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monxide: 181.73 kOhm  
Nitrogen Dioxide: 28.29 kOhm  
Noise: 3 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:49:43

\*\*\*\*\*

SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26920 C RAW  
Humidity: 25384 % RAW  
Light: 87.80 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monoxide: 191.51 kOhm  
Nitrogen Dioxide: 28.60 kOhm  
Noise: 2 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:50:18  
\*\*\*\*\*

SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26904 C RAW  
Humidity: 25364 % RAW  
Light: 87.80 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monoxide: 181.95 kOhm  
Nitrogen Dioxide: 28.61 kOhm  
Noise: 10 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:50:43  
\*\*\*\*\*

SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26888 C RAW  
Humidity: 25220 % RAW  
Light: 87.80 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monoxide: 192.75 kOhm  
Nitrogen Dioxide: 28.74 kOhm  
Noise: 26 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:51:18  
\*\*\*\*\*

SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26880 C RAW  
Humidity: 25108 % RAW  
Light: 87.80 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monoxide: 181.98 kOhm  
Nitrogen Dioxide: 28.78 kOhm  
Noise: 25 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:51:48  
\*\*\*\*\*

SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26832 C RAW  
Humidity: 25460 % RAW  
Light: 87.80 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monoxide: 191.69 kOhm  
Nitrogen Dioxide: 28.87 kOhm  
Noise: 37 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:52:13  
\*\*\*\*\*

SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26836 C RAW  
Humidity: 25252 % RAW  
Light: 87.80 lx  
Battery: 100.00 %

Solar Panel: 0 mV  
Carbon Monxide: 181.91 kOhm  
Nitrogen Dioxide: 29.00 kOhm  
Noise: 54 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:52:43  
\*\*\*\*\*

SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26856 C RAW  
Humidity: 25016 % RAW  
Light: 87.80 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monxide: 191.80 kOhm  
Nitrogen Dioxide: 29.03 kOhm  
Noise: 78 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:53:10  
\*\*\*\*\*

SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26860 C RAW  
Humidity: 25212 % RAW  
Light: 87.80 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monxide: 181.86 kOhm  
Nitrogen Dioxide: 29.36 kOhm  
Noise: 59 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:53:48  
\*\*\*\*\*

SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26864 C RAW  
Humidity: 25360 % RAW  
Light: 87.80 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monxide: 191.83 kOhm  
Nitrogen Dioxide: 29.42 kOhm  
Noise: 165 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:54:18  
\*\*\*\*\*

SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26876 C RAW  
Humidity: 24968 % RAW  
Light: 87.80 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monxide: 182.29 kOhm  
Nitrogen Dioxide: 29.53 kOhm  
Noise: 0 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:54:44  
\*\*\*\*\*

SCK Connected!!  
updates = 1  
Posted to Server!  
Old connection active. Closing...  
Temperature: 26924 C RAW  
Humidity: 24556 % RAW  
Light: 86.30 lx  
Battery: 100.00 %  
Solar Panel: 0 mV  
Carbon Monxide: 192.71 kOhm  
Nitrogen Dioxide: 29.81 kOhm  
Noise: 0 mV  
Wifi Spots: 3  
UTC: 2014-12-12 2:55:18  
\*\*\*\*\*

SCK Connected!!  
updates = 1

```
Posted to Server!
Old connection active. Closing...
Temperature: 26772 C RAW
Humidity: 24980 % RAW
Light: 88.90 lx
Battery: 100.00 %
Solar Panel: 0 mV
Carbon Monoxide: 182.96 kOhm
Nitrogen Dioxide: 29.84 kOhm
Noise: 0 mV
Wifi Spots: 3
UTC: 2014-12-12 2:55:48
*****

SCK Connected!!
updates = 1
Posted to Server!
Old connection active. Closing...
Temperature: 26792 C RAW
Humidity: 25056 % RAW
Light: 87.60 lx
Battery: 100.00 %
Solar Panel: 0 mV
Carbon Monoxide: 191.71 kOhm
Nitrogen Dioxide: 29.83 kOhm
Noise: 3 mV
Wifi Spots: 2
UTC: 2014-12-12 2:56:18
*****

SCK Connected!!
updates = 1
Posted to Server!
Old connection active. Closing...
Temperature: 26868 C RAW
Humidity: 25244 % RAW
Light: 87.60 lx
Battery: 100.00 %
Solar Panel: 0 mV
Carbon Monoxide: 180.09 kOhm
Nitrogen Dioxide: 29.53 kOhm
Noise: 3 mV
Wifi Spots: 2
UTC: 2014-12-12 2:56:43
*****
```

PY

ppyordanov commented on Dec 12, 2014



Note: another update associated with the SCK is a time window change that will enable the kit to transmit data more often so that more test updates can be collected in a shorted time span - the previous time window was 30 seconds and it has been reduced to 10. However, there are some interval fluctuations based on internet connection capacity/ speed and testing conducted in the next couple of days will also explore how this affects output data.

PY

ppyordanov commented on Jan 21



*This task has been completed and can be closed now.*



PY

ppyordanov closed this on Jan 21

PY

Write

Preview

Markdown supported Edit in fullscreen

Leave a comment

Attach images by dragging & dropping, selecting them, or pasting from the clipboard.

Reopen issue

Comment

