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how to connect multiple slave nodes to master node

Answered



Shi Wen Phan

asked this on January 27, 2014, 09:17

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I am currently working on a project which requires me to connect 2 slave nodes to a master node. As of now, I am able to connect a slave node successfully to the master node via the `gap_connect_direct` method. However, once the master node is connected to the first slave node, any attempt to execute a second `gap_connect_direct` to connect my second slave node to the master node ends up in vain.

As there are not much documentation available with regard to this topic, any help would be greatly appreciated. Thank you.

5 people would like this to be answered.

Me too!

Comments



Greg Rowberg

Shi,

It sounds like you might be running into a connection limitation set in `config.xml` in your project source files. Assuming you aren't using the BLED112 with factory default firmware, the connection limit is probably set to 1. Page 26 of the Bluetooth Smart Configuration Guide shows how to set the maximum number of connections. In your `config.xml` file, you'll want to set `<connections value="2"/>`. This should allow your second slave node to connect without an issue.

Also note, however, that your connection interval value will need to be set as shown on Page 26 of the same guide. The connection interval value must be set to a value divisible by $2.5 * (\text{number of connections})$, with a minimum value of 7.5ms. In this case, your minimum interval value would be 10ms ($2.5\text{ms} * 2 \text{ connections}$; $\geq 7.5\text{ms}$).

January 28, 2014, 05:56

Answer



Shi Wen Phan

Thanks Greg. It worked perfectly.

February 8, 2014, 04:02

ANDRES
URSUEGUIA

I also want to connect to several slaves (iphones) from a master (ble113). The question is if for example once a `Connect_direct` is called I need to wait to connection answer or i can send at the same time various connects to the different addresses. Also the same when you for example are discovering services etc...

Anybody knows if that's possible or the process needs to be sequential....

February 27, 2015, 17:03

Jeff Rowberg
Bluegiga
Technologies

Hi Andres,

Connection requests must all be done asynchronously, one at a time. You cannot have multiple pending requests waiting for answers from different devices. The same thing applies to any attribute client operations; you can have only one pending acknowledged operation at a time, such as GATT service or descriptor discovery, or reading data or writing data.

February 27, 2015, 17:06

Answer

ANDRES
URSUEGUIA

Jeff

Thanks for your quick answer.

I will re-think the solution.

Perhaps it will be enough if I do something like connect-send-disconnect device by device....

Need to test

Thanks again

February 27, 2015, 20:07