473Use Guidance-How to use MQTTS

1. Module connection MQTTS server communication

1.1 Summary

This part gives the sample process, set the MQTTS parameter of the module A、B, connect the module A、B to the MQTTS server and communicate with the server.

1.2 Operating instructions

NOTE：

1.Through the MCU to send command to control module,The command statement ends with the character "\r\n";

2.Through the serial port tool send command to control module,The command statement ends with the Enter;

3.For ease of viewing, the information sent back to the command is displayed in the ASCII code. If there is information that is not comprehensive or garbled, may have special characters return information,China text or other information,Then please display in sixteen.

Please remember the above, these are not repeated at the back of the document.

1.3 Parameter setting

Module A parameters

clientId:DXOE
alive:30
username:as
password:asasas
svr_ip:192.168.0.108
svr_port:1880
sub_topic:modulBS
pub_topic:modulAS

Module B parameters

clientId:CSCJ
alive:30
username:bs
password:bsbsbs
svr_ip:192.168.0.108
svr_port:1880
sub_topic:modulAS
pub_topic:modulBS

1.4 Operation steps

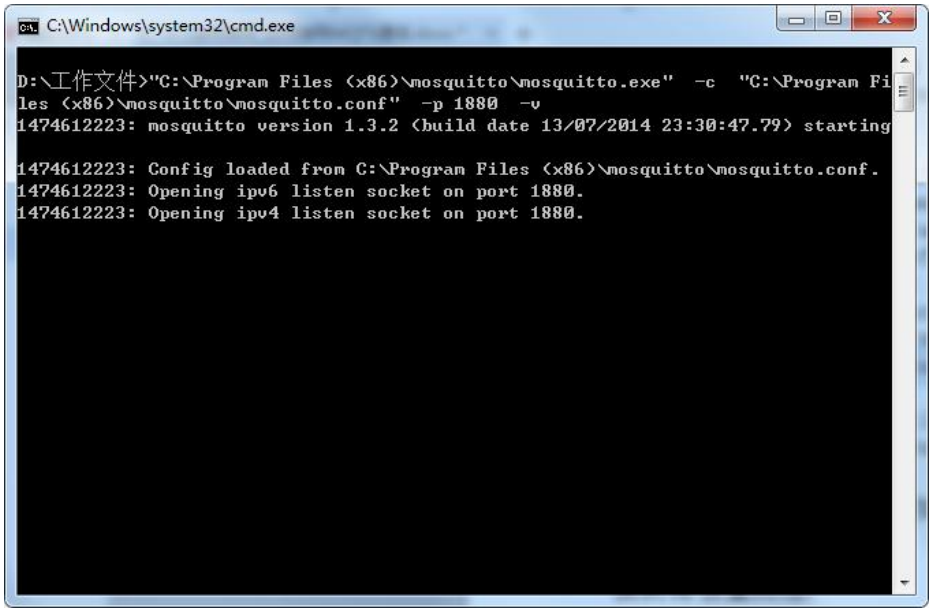
Install mosquitto software,Create a virtual MQTT serve， Open mosquitto Installation directory mosquitto.conf file， Change the path in the red box in the following picture to the path of the SSL certificate(Certificate path cannot contain spaces)。If you do not want to set the certificate, In the blue box will be changed into require_certificate false，If you want to set the certificate, In the blue box will be changed into require_certificate true. In the PC side CMD interface to enter "C:\Program Files (x86)\mosquitto\mosquitto.exe" -c "C:\Program Files (x86)\mosquitto\mosquitto.conf" -p 1880 -v （ C:\Program Files

(x86)\mosquitto\mosquitto.exe show mosquitto.exe File path，"C:\Program Files (x86)\mosquitto\mosquitto.conf" show mosquitto.conf File path， 1880 show the MQTT sever Port number）

Be careful：If you want to use SSL，The ssl server Packet must less than 8K。

```
# certificate files must have ".crt" as the file ending and you must run
# "c_rehash <path to capath>" each time you add/remove a certificate.
cafile   C:\Users\Administrator\Desktop\rakcert\raktest_ca.crt
#capath

# Path to the PEM encoded server certificate.
certfile   C:\Users\Administrator\Desktop\rakcert\raktest_client.crt

# Path to the PEM encoded keyfile.
keyfile   C:\Users\Administrator\Desktop\rakcert\raktest_client.key

# This option defines the version of the TLS protocol to use for this listener.
# The default value will always be the highest version that is available for
# the version of openssl that the broker was compiled against. For openssl >=
# 1.0.1 the valid values are tlsv1.2 tlsv1.1 and tlsv1. For openssl < 1.0.1 the
# valid values are tlsv1.
#tls_version

# By default a TLS enabled listener will operate in a similar fashion to a
# https enabled web server, in that the server has a certificate signed by a CA
# and the client will verify that it is a trusted certificate. The overall aim
# is encryption of the network traffic. By setting require_certificate to true,
# the client must provide a valid certificate in order for the network
# connection to proceed. This allows access to the broker to be controlled
# outside of the mechanisms provided by MQTT.
require_certificate true

# If require_certificate is true, you may set use_identity_as_username to true
# to use the CN value from the client certificate as a username. If this is
```

MQTT server to create success as shown below：



Module A setup process：

1.Power to module

Return：Welcome to RAK473, also show as sixteen（57 65 6C 63 6F 6D 65 20 74 6F 20 52 41 4B 34 37 33 0D 0A ）。

2.Configure the module to the router, Can refer **473476Use guidance-How to Easyconfig**、**473476Use guidance-How to use WPS** and so on.

3.If you want to set SSL Certificates， Can refer **473Use guidance-How to set SSL Certificates,** (SSL Certificates must be consistent with the certificate uploaded by the server)。

4.Initialize mqtt parameters

Send：at+mqtt_init=DXOE,30\r\n

Return：4F 4B 0D 0A

5.Set authentication parameters

Send：at+mqtt_auth=as,asasas\r\n

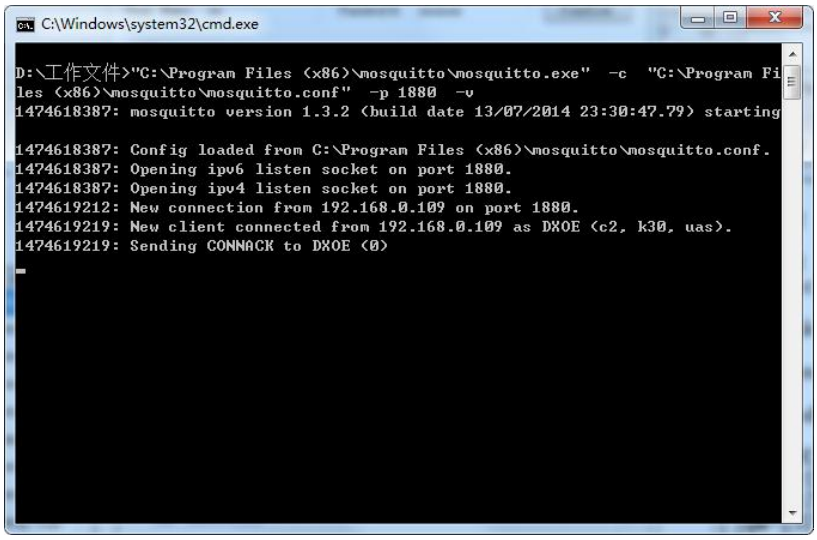
Return：4F 4B 0D 0A

6.Connect server

Send：at+mqtt_con=192.168.1.113,1881,0\r\n

Return：4F 4B 0D 0A

Connected to the server will be shown as the following figure：



7.Set subscription

Send：at+mqtt_sub=moduleBS\r\n

Return：4F 4B 0D 0A

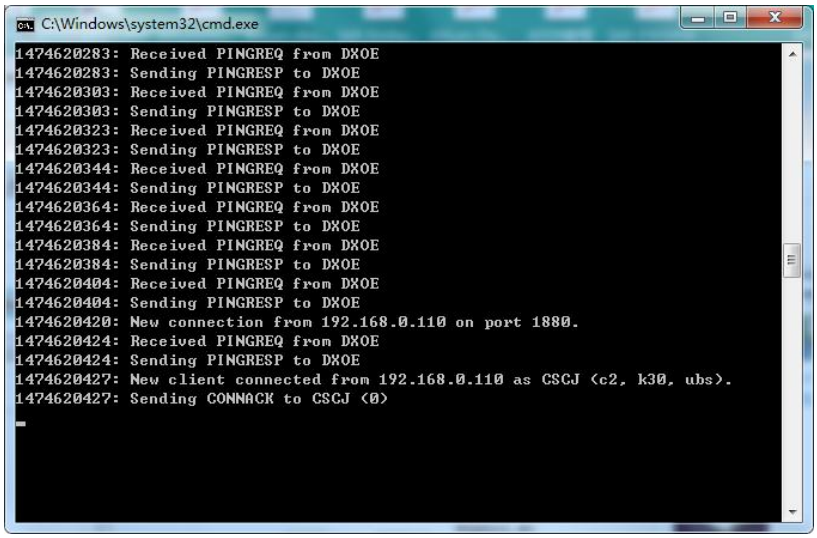
8.Set push theme

Send：at+mqtt_pub=moduleAS,1\r\n

Return：4F 4B 0D 0A

Module B setup process：

According to the parameters of module B, the configuration mode of the reference module A, To bconfiguration parameters of the module B.

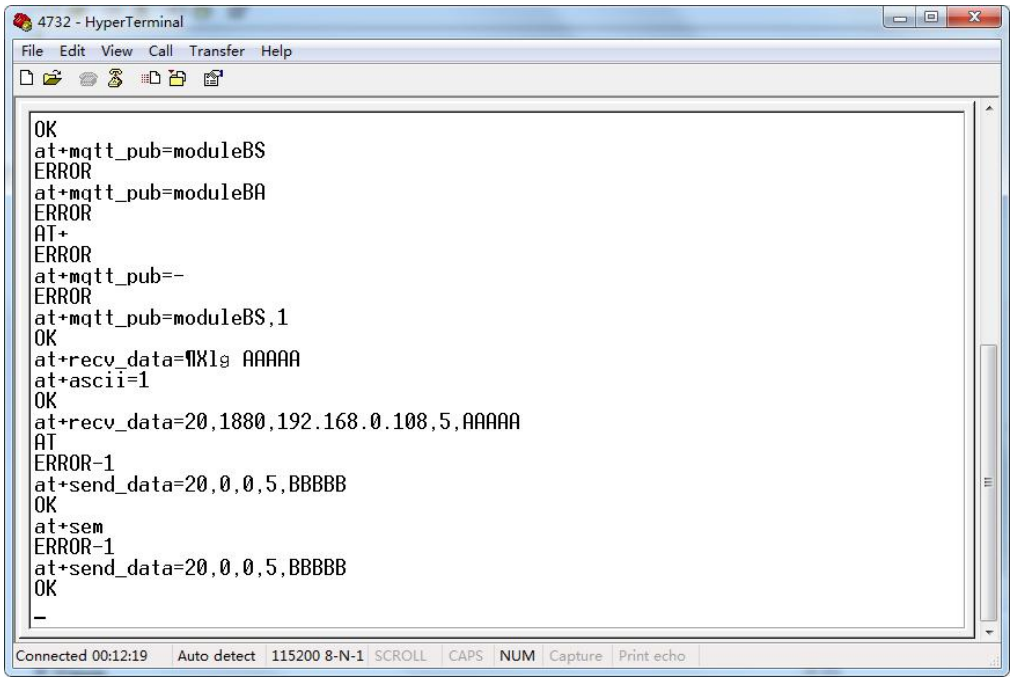


Push theme for the moduleAS module A to subscribe to the theme of the module B moduleBS push data

Return：at+send_data=20,0,0,5,AAAAA\r\n

Module B Return：OK\r\n

Module A Return：at+recv_data=20,1880,192.168.0.108,5,AAAAA\r\n



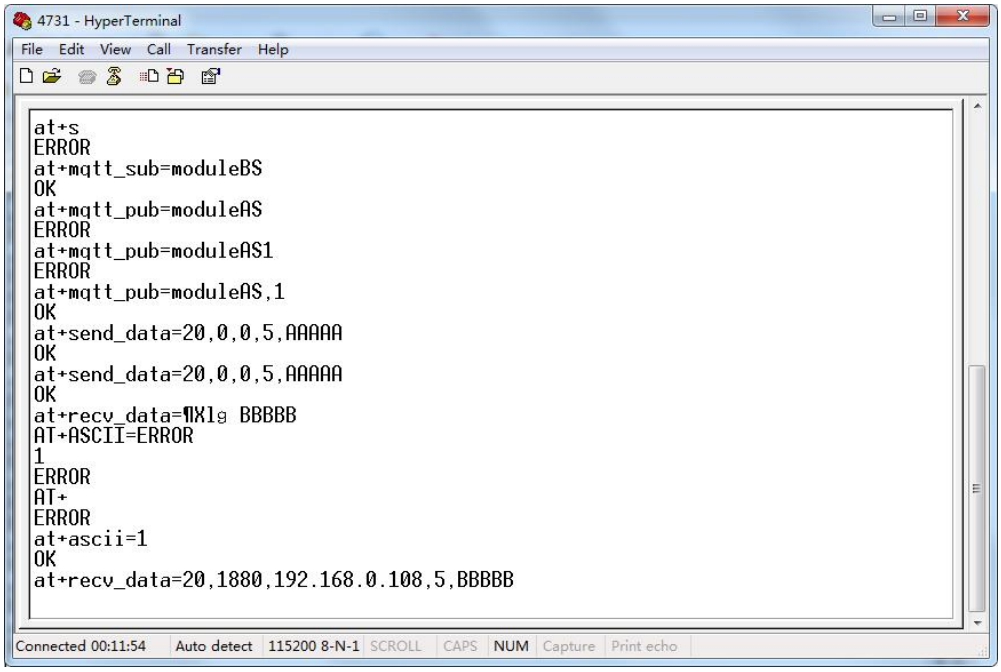
picture 1-1 Module B serial port to send commands to the schematic

Push theme for the moduleBS module B to subscribe to the theme of the module A moduleAS push data

Return：at+send_data=20,0,0,5,BBBBB\r\n

Module B Return：OK\r\n

Module A Return：at+recv_data=20,1880,192.168.0.108,5,BBBBB\r\n



picture 1-2 Module A serial port to send commands to the schematic

2. Modify record

Version	Author	Time	Modify content
V1.0	王连博	2016/02/02	Create documents
V1.1	操小成	2016/09/24	Update document